crux

Risk mitigation and due diligence

Emerging standards for transferable tax credit transactions

June 2024

Executive summary

The market for transferable clean energy and manufacturing tax credits has experienced significant growth since the Treasury Department issued draft guidance for the Inflation Reduction Act's (IRA) transferability provision in June 2023. Estimated total transfer activity in 2023 reached $7-$9 billion, with projections indicating that the market could expand to $100 billion annually by 2030. These transactions, while simpler than tax equity partnerships, still require careful due diligence by legal and tax professionals to manage transaction risks effectively.

Crux surveyed nearly three dozen of the most experienced legal, tax, and financial advisors and insurers, with experience across hundreds of tax credit transactions. Collectively, the firms interviewed have represented parties in the overwhelming majority of transactions in the emerging transferable tax credit market. The result is a rigorous analysis demonstrating the importance of the due diligence process in driving an efficient transaction, the key risks, the degree of alignment around due diligence items and deal terms.

Key findings:

Transparency and alignment on due diligence drives successful transactions:

Early alignment between buyer and seller in the due diligence process is crucial for ensuring successful and efficient transactions. According to the survey, nearly 40% of advisors found that due diligence has been a cause of transaction delays. Over 70% of advisors indicated that buyer education is the most important driver of a smooth transaction, while 66% emphasized the importance of seller preparation for due diligence.

Key transaction risks are increasingly well understood:

The primary risks in tax credit transactions include recapture, eligibility and qualification issues, and basis/excessive credit transfer risks. Across more than 500 transactions, advisors report that recapture has occurred in about 0.5% of historical tax credit and tax equity deals; approximately 80% of advisors that responded to our survey indicated they had never seen a recapture event, highlighting its rarity. Most observed instances of recapture were partial events, related to weather damage. Still, these risks remain important considerations for buyers who need to assess and mitigate them appropriately. Crux's 2023 Market Intelligence Report observed that buyers typically mitigate recapture risks on investment tax credit (ITC) transactions with third party insurance (75% of deals) and/or with indemnification by the seller (20% of deals).

But different advisors play different roles:

The due diligence process differs between legal/tax advisors, financial advisors, and insurers according to their roles and responsibilities. Legal advisors tend to do the most primary analysis and avoid relying on other law firms' legal memoranda or opinions (50% indicate that they don't depend on opinions provided by seller counsel), while tax advisors and insurers do tend to review these items. Tax advisors are far more likely (80%) to conduct a five-factor analysis to determine whether a project has been placed-in-service, while other advisors are more likely to rely on a Permit-to-Operate letter from a utility.

Growing consensus among advisors regarding risk mitigation:

There is increasing cohesion among law firms, tax advisors, financial institutions, and insurance brokers regarding the essential due diligence items and most commonly negotiated deal terms in tax credit transactions.

Development of a due diligence checklist:

Based on the survey findings, Crux has developed a market-validated due diligence checklist by transaction type — covering ITCs, non-manufacturing production tax credits (PTC), and advanced manufacturing PTCs (§45X) — to aid in the preparation for and execution of tax credit transactions. All Crux platform users have access to this diligence checklist, which is continually updated as market standards evolve. This checklist streamlines the deal process, ensuring that all necessary steps are taken to identify and mitigate risks effectively. If likely diligence items are well-understood by sellers and buyers at the outset of the process, there is less room for dissonance later in the process.

Crux's research underscores the critical role of due diligence in tax credit transactions, highlighting the need for transparency, alignment, and standardized practices to facilitate market growth and efficiency. The introduction of transferability has simplified the transaction process, but intentional preparation and understanding of risks remain essential for successful transactions.

Survey framing and structure

Crux conducted a survey in April and May 2024 of due diligence practices and opinions. Crux distributed the survey to 75 leading advisors in tax credit transactions, including law firms, tax advisory firms, insurers, financial institutions, and syndicators. Ultimately, **Crux received over 40 responses from 35 institutions** representing many of the **most experienced tax credit advisory and law firms.** In total, the surveyed advisors represent experience with more than 500 tax credit transactions, including advising on tax equity partnerships and tax credit transfers. The survey consisted of 16 questions and, on average, took 20 minutes to complete and responses were provided on an anonymous basis.

Respondents were asked for their observations regarding factors that contributed to the success or derailment of a tax credit transaction. In a second portion of the survey, advisors were asked to rank the level of review for 24 common due diligence items. For each item, advisors reported whether they typically “review in depth,” “confirm the existence,” “sometimes review,” or “do not usually review” the item.

In the final portion of the survey, Crux asked respondents to rank seven common contract terms that are negotiated in the course of a tax credit transfer agreement (TCTA). Advisors were asked to rank whether they “heavily negotiate,” “commonly negotiate,” or are “commonly aligned” on each of these terms.

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[1] *Crux received responses from 14 law firms, seven tax advisory firms, nine financial firms, and five insurers/insurance brokerage firms.*

To control for the variety of unspecified factors which can influence the relative importance of one due diligence item over another, advisors were asked to opine from the perspective of the buyer of an investment tax credit (ITC) from an operating solar project with a 20% step-up in basis. Practically, the profile of the transaction inevitably influences the due diligence approach.

Crux analyzed these results qualitatively and quantitatively. We evaluated which items were indicated as the most commonly and heavily reviewed and which items are most often not provided during the due diligence process. We evaluated the data on an aggregate basis and constructed cross tabs based upon the advisor persona. Respondents provided qualitative context to their answers, and responses were evaluated through this added context as well.

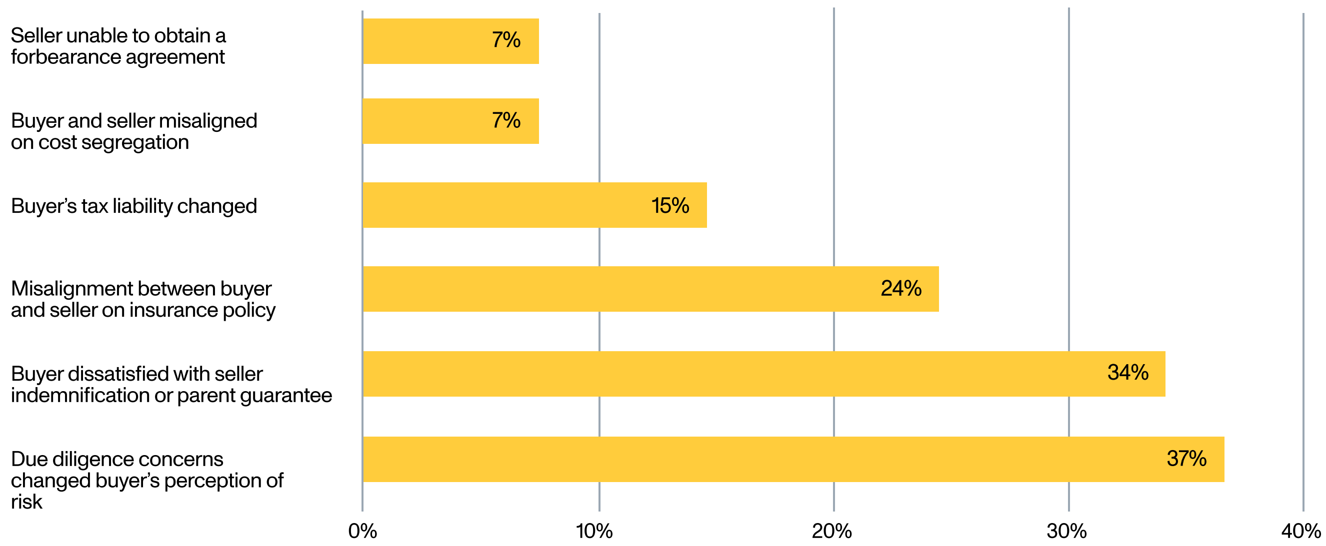
This report reflects the cumulative findings of this analysis, as well as the qualitative insights of the Crux team. We have facilitated deals for developers, manufacturers, and banks selling credits related to wind, solar, standalone storage, microgrids, bioenergy and renewable natural gas, and advanced manufacturing. Buyers range in size from the Fortune 100 to family offices.

01 Preparing for a successful transaction

Due diligence, clear understanding of risks, and preparation are the key components of a successful tax credit transaction.

Due diligence is an important part of the tax credit transaction process. Crux has observed that well-prepared parties are able to transact in as little as 3-4 weeks when both parties are aligned on the due diligence process and the seller is prepared to furnish the required items. Traditional tax equity partnership deals typically take much longer, around 6-9 months. Legal fees for transfers are also somewhat reduced — Crux is observing legal expenses on standalone ITC transactions to be 30-50% of what might be typical for similarly sized traditional tax equity deals. PTC deals, which are lower risk, can achieve even greater efficiencies in legal costs. Despite more efficient processes, due diligence can contribute to transaction delays, particularly if parties are not prepared or are misaligned in their expectations. According to Crux's survey of financial, legal, and tax advisors, **due diligence was the cause of a transaction delay in nearly 40% of cases.**

Figure 1.1: Most common cause of transaction delay or derailment



The second- and third-most common factors also relate to transaction risk management, including misalignment over the strength of a parent indemnification or over the scope of the insurance policy. It is clear that the most significant factors affecting the timely close of a transaction are related to the parties' understanding of risk and the means by which they agree to mitigate that risk, either through insurance or through indemnification by the seller or their ultimate parent.

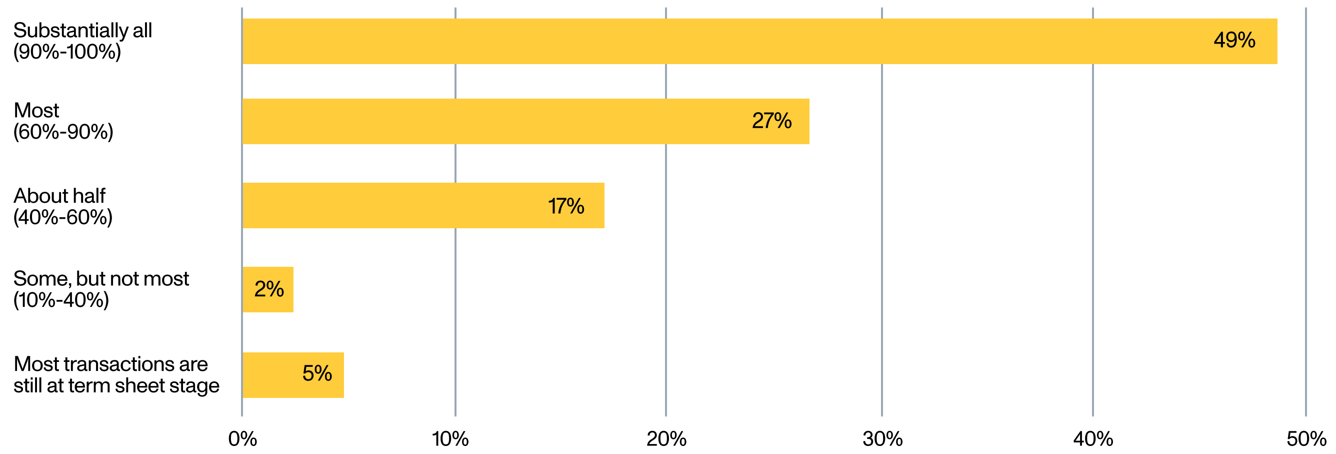
Tax credit transactions are, at their core, commercial transactions that look to proper diligence to price risk, and to insurance, indemnities, and guarantees to provide buyers financial security.

Other factors can include changes outside the control of the parties such as, for instance, a change to the tax liability of the buyer.

Despite the risk of delays, most advisors report that deals tend to eventually work out. On average, roughly Crux observes that 80-90% of transactions that reach the term sheet stage eventually close. 92% of advisors surveyed indicated that at least half of the transactions they're engaged in have or will close. A plurality indicates that substantially all their deals have closed.

Figure 1.2 Advisors expect to close, or have closed, the majority of their transactions

For transactions that are at or beyond term sheet stage

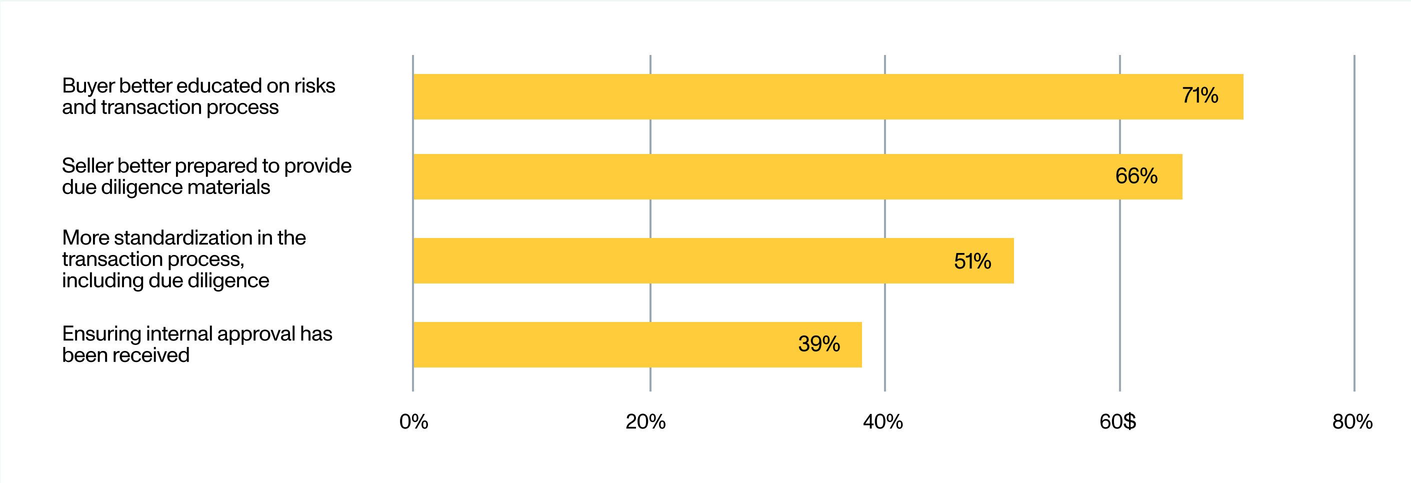


Legal, tax, and financial advisors and insurers who report that they've closed substantially all their transactions are much more likely to report that deals closed quickly and without delay; nearly half report that most of their deals have or will close without delay. The adage "time kills all deals" certainly seems to apply here, and the data emphasizes the value of efficient and early alignment between deal counterparties.

Transferability is a new tool to most tax credit buyers (and to many sellers), and effective preparation is the most significant driver of a smooth transaction.

Over 70% of advisors indicate that buyer education is the most important driver of a smooth transaction, followed closely by 66% of advisors who say that seller preparation for due diligence is the most important factor.

Figure 1.3 Key tactics to drive a smooth tax credit transaction



02 Tax credit transaction risks and mitigation factors

The data revealed a clear and concise list of the risks which advisors identify as most important. Unlike a tax equity partnership, where the buyer is an active investor in the project for a period of years, a tax credit transfer conveys a more discrete set of risks. These risks can vary according to the project technology type or the tax credit type, but broadly conform to issues of **eligibility and qualification**, risk of **excessive credit transfer**, and **risk of recapture** (particularly, but not exclusively, for ITCs).

Advisors indicate that they conduct the most detailed review of the items which inform these core risks. Table 2.1 summarizes a sample of due diligence items which are commonly reviewed in order to assess the relative significance of these central transaction risks. The subsequent section details the broader scope of due diligence items that are commonly required in a tax credit transaction, including the items in table 2.1 as well as a number of other items commonly required by advisors.

Table 2.1 Key transaction risks, sources, and related due diligence items

Transaction risk	Sources of risk	Sample due diligence items*
Eligibility and qualification	Project is determined not to be eligible for claimed tax credits Project determined not to be eligible for PWA/bonus adder(s)	PWA documentation Seller counsel legal opinion/memos 80/20 report (for repowering) Placed-in-service documentation
Basis/excessive credit transfer	Project ITC cost basis is overstated PTC activity improperly recorded Project transfers tax credits in excess of their eligibility	Third-party cost segregation Appraisal MIPA and partnership formation docs Project organization chart Any retained tax credits by seller
Recapture	Project ceases to operate as ITC-eligible property during recapture period Disposal of non-partnership interest ITC-eligible project ceases to qualify for Prevailing Wage & Apprenticeship (PWA) bonus during 5-year recapture period (for 45Q) sequestered CO2 leaks out of storage facility	Project ownership and capitalization Forbearance agreement(s) Financial statements P&C insurance policy Evidence of all permits Prevailing wage & apprenticeship documentation (PWA)

See Section 3 for details on frequency and depth of review for each item

It is important to note that this is not a comprehensive list of risks. For example, administrative risks, like ensuring everyone properly files the transfer election statement, are not included. This list is intended to represent some of the most material considerations for buyers.

Project eligibility and qualification

Eligibility for tax credits and any bonus adders is a critically important component of the due diligence process. Eligibility analysis is becoming more central to many advisors' analysis as the safe harbor windows for certain common bonuses, including the PWA bonus adder, lapsed in 2023. Legal memos or opinions can substantiate these determinations for certain advisors, but tax credit sellers should anticipate that the buyer's legal team will conduct their own analysis of the project's eligibility and qualification for claimed tax credits. Figure 2.3 illustrates which tax credit categories are principally eligible for the PWA, Domestic Content, and Energy Communities bonus adders.

Figure 2.3 Summary of tax credit base values and bonus adders

			Bonus adders		
Tax credit	**Section**	**Base value ***	**PWA**	**Domestic content**	**Energy communities**
Renewable electricity PTC	45	0.03 c/kWh	5 times the base rate	10% bonus	10% bonus
Energy property ITC	48	6% of qualified investment (basis)	5 times the base rate	10% bonus	10% bonus
Low income communities bonus	48e	6% of qualified investment (basis)	For solar and wind facilities up to 5 MW. Capped at 1.8 GW per year. Credit is increased by 10 percentage points for projects located in low-income communities or on tribal land. Credit is increase by 10 percentage points for projects that are part of certain federakky subsidized housing programs or other eligible property		
Nuclear PTC	45U	0.03 c/kWh**	5 times the base rate		
Advanced energy project ITC	48C	6%	if met, 30% base credit		
Advanced manufacturing PTC	45X	Varies by product			
Alternative fuel vehicle refuelling property	30C	6% of the cost for business limited to a $100,000 credit per item of property	if met, 30% base credit		
Clean fuel PTC	45Z	Base amount is $0.20/gal (non-aviation fuel), $0.35/gal (aviation fuel) multiplied by emissions factor of fuel	5 times the base rate		
Carbon dioxide sequestration PTC	45Q	$12/ton for EOR / $17/ton for CCS DAC projects get $26/ton for EOR / $36/ton for CCS	5 times the base rate		
Clean hydrogen PTC	45V	$0.60/kg multiplied by the applicable emissions percentage (20% to 100%)	5 times the base rate		
Clean electricity PTC (technology neutral)	45Y	0.03 c/kWh	5 times the base rate	10% bonus	10% bonus
Clean electricity ITC (technology neutral)	48E	6% of qualified investment (basis)	5 times the base rate	10% bonus	10% bonus

For ITCs and PTC strips, qualification is an ongoing requirement for the PWA bonus adder. Throughout the recapture period (for the ITC) and throughout the period for which a project claims the PTC, projects must meet the following criteria (from the IRS):

Prevailing wage requirements:

All laborers and mechanics employed by the taxpayer (or any contractor or subcontractor) on the construction, alteration, or repair of a qualified facility, project, property, or equipment (hereafter referred to as facility) are paid wages at rates that are not less than the prevailing rates determined by the Department of Labor in accordance with subchapter IV of chapter 31 of title 40 of the U.S. Code (the Davis-Bacon Act) for the type of work performed in the geographic area of the facility.

Apprenticeship requirements:

Consists of three components — a labor hours requirement, a ratio requirement, and a participation requirement. Under the labor hours requirement, the taxpayer must ensure that, depending on when construction began, 12.5% or 15% of the total labor hours performed in the construction, alteration, or repair of the facility are performed by qualified apprentices from a registered apprenticeship program. Under the ratio requirement, the taxpayer must ensure that the applicable ratio of apprentices to journeyworkers established by the registered apprenticeship program are met for apprentices working on the facility each day. Under the participation requirement, any taxpayer (or contractor or subcontractor) that employs four or more laborers or mechanics in the construction, alteration, or repair of the facility must also hire at least one qualified apprentice.

The IRS has published detailed instructions for companies who neglect to meet PWA requirements to “cure” that deficiency. However, the risk of recapture is conveyed with the tax credit but is outside of the tax credit buyer’s purview. As a result, buyers generally require the seller to completely indemnify them for recapture risk, either through a guarantee from an investment grade parent/sponsor or third-party insurance.

Advisors' notes on eligibility and qualification:

> **"Tax-related diligence is extensive, focusing on qualification questions."**

> **"Begin construction analysis is and will be crucial for various deadlines. Lots of foot faults on safe harbor planning."**

> **"Having third party provide documentation that supports every element of calculating the credit [is essential] (production & sale of electricity, BOC, PIS, PWA, Cost Seg, Appraisal, etc.)"**

Excessive credit transfer

If a tax credit buyer is determined to have claimed tax credits in excess of the amount a project is eligible to generate or a seller is entitled to sell, the buyer is subject to an excessive credit transfer tax. The tax is equal to the amount of the excessive transfer plus a 20% penalty. However, the penalty can be waived by the IRS in the event that the buyer is able to demonstrate that the excessive credit transfer resulted from "reasonable cause," or that the buyer had reason to believe that the transfer was not excessive based upon the information available to them at the time. Information upon which the IRS would expect the buyer to rely includes third-party expert reports, representations from the seller, and financial statements, among other information.

If the seller retains a portion of the tax credit, the excess transfer amount is first reduced by the retained portion of the tax credit. If more than one buyer is determined to have an excessive transfer, the excessive transfer tax and the penalty are both calculated proportionally.

Figure 2.2 Summary of excessive credit transfer and penalties

Party	Transferred/retained credits		Excessive transfer tax (including 20% penalty) (X-Y)*(1+20%)
	Initially (X)	After excessive credit determination (Y)	
Seller	$10	$0	
Buyer A	$60	$54.40	$6.60
Buyer B	$50	$45.50	$5.40

Excessive credit transfer can arise from two common situations, including from an overstatement of the project's cost basis based on 1) erroneous cost segregation (i.e. including costs in the cost basis which are not ITC-eligible, or 2) a challenge to the fair market value (FMV) determination, where the appraised value leads to overstated ITC value. Buyer advisors indicate that they conduct careful and fact-specific analysis depending upon whether either or both of these situations is applicable to a tax credit transaction.

Cost segregation

A cost segregation study (often abbreviated "cost seg") is a core element to any ITC transaction. Cost segregation studies evaluate the ITC-eligible expenditures for a given project which form the cost basis for an ITC (which is determined as a percentage of the cost basis), as well as the applicable depreciation periods for each asset or piece of property. While a project may prepare its own cost segregation report, a third-party study is most often required by tax credit buyers to ensure accuracy of the tax credit estimation.

Step-up in basis

Projects may take on an equity investment from an unrelated third-party before entering service, and, in doing so, step-up the project's cost basis (and ITC value) to fair market value. In this case, the cost segregation report will still be a required diligence item and may inform a third-party appraisal. The appraisal and cost seg collectively inform the project's new ITC basis. These dynamics are not relevant to PTC transactions where credit amounts are derived from actual production.

Advisors indicate that they tend to scrutinize ITC step-ups with care. Project valuation requires careful and fact-specific analysis. Advisors note that they tend to conduct the most detailed analysis in cases where the seller seeks to transfer all credits, rather than retaining a portion, which would help dampen the impact of an excessive tax credit transfer penalty.

The IRS has not provided definitive guidance regarding ITCs calculated off of FMV. Beginning in 2009, the tax equity industry began to adopt a rule of thumb step-up equivalent to around a 15%-20% increase in the project's construction cost, but industry standards are evolving rapidly. While often thought of as a percentage, the step-up reflects a more nuanced analysis, and there are no explicit rules regarding step-up limitations. A true third-party investment (whether from a tax equity partner or other JV partner) is a key component of a project's ability to reliably establish and justify a fair market value. The level of risk borne by the investor — the holding period and their level of investment — may weigh as evidence of their "skin in the game". For example a 20% equity injection that is paid back over a 5-year period, versus an 80% long-term ownership stake may be analyzed differently.

It is common to obtain insurance indemnifying the tax credit buyer against a risk that the future tax credit basis may be redetermined. Insurers will conduct their own diligence of the project's cost basis if they are asked to insure either the cost basis or the project's step-up or both. Crux has observed that some insurers may cap the value of the step-up they are willing to ensure, and may require sellers to retain some risk.

In all cases where a tax credit value is determined based on FMV, advisors are likely to look at the quality of the appraisal, the methodology used by the appraiser, and the reputation of the appraiser. A variety of methods may be used by appraisers, including an income approach, cost approach, and/or market approach (informed by comparison with comparable projects). In Crux's interviews with insurers and legal advisors regarding the most effective appraisal approach, we have observed that insurers, in particular, prefer a three-pronged approach incorporating all appraisal methodologies.

Advisors’ notes on eligibility and qualification:

> “Step-up mechanics also commonly reviewed; degree of step-up also negotiated; many items mentioned above are more likely to be reviewed by the insurance carrier rather than the buyer”

> “Heavy diligence now, but may become less over time, especially… where [the deal is] only partial transfer because the 20% [excessive credit transfer] penalty is less likely to apply.”

> “Buyers are always at risk for the 20% penalty, but the more credits the seller retains, the lower the risk.”

> “The risk of an audit is not necessarily increased, but the risk of success for the IRS is increased with a more aggressive step up, based upon informal IRS guidance and experiences in audits to date.”

> “If an appraiser has a good reputation in the industry and uses well accepted methodologies drawing from established data sets, it becomes hard to prove their appraisal is wrong, particularly if a bank is lending against the valuations.”

Tax credit recapture

ITCs are subject to the recapture rules currently set forth in Internal Revenue Code (IRC) Section 50. IRC Section 50(a)(1) generally allows for the recapture of some amount of the ITC claimed if, during any tax year, investment credit property is disposed of or otherwise ceases to be investment credit property with respect to the taxpayer before the close of the recapture period. The recapture period begins when the project is placed into service and vests proportionally over five years.

Recapture risk follows the ITC, even if it is sold. In final guidance regarding tax credit transferability, the IRS confirmed that the tax credit buyer (the "transferee") is proportionately liable for recapture of any transferred tax credit. An exception exists in the event that a partner or S corp shareholder has disposed of their interest, in which case the partner/shareholder retains the liability for recapture.

Recapture is a primary risk that tax credit buyers seek to manage, but it is nonetheless a rare event. According to Crux's survey of advisors, representing hundreds of tax credit transactions across tax equity and transfers, **recapture has historically occurred in less than 0.5% of transactions.** Approximately 80% of advisors indicated they had never seen a recapture event occur. The remaining 20% of advisors estimate that they had seen recapture occur in 1-2% of transactions. Those who had seen recapture events noted that they are very often partial recapture

Advisors' examples of incidences of recapture:

> **"We've seen recapture trigger in tax equity transaction...for storm events triggering damage. We've also seen situations where Sponsor triggered partial recapture due to a transfer of its 1% interest or to put shared facilities agreements in place where one facility was already operating."[1]**

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[2] *A separate category of recapture exists for 45Q carbon capture production tax credits (PTCs) (Section 26 CFR § 1.45Q-5). Carbon capture tax credits are generated when a ton of carbon oxide gas is geologically sequestered in geological storage or used as a tertiary injectant (as in enhanced oil recovery). Recapture occurs when the carbon oxide/dioxide gas ceases to be sequestered and leaks into the atmosphere. Recapture amounts are recognized in the tax year in which the recapture event is recognized and reported. For the 45Q tax credit, the recapture period extends from the date of first sequestration, and terminates three years after the last tax year in which the owner of the tax credit takes it on their returns (including any carryforward).*

"I have seen two tax equity recaptures. One was a weather event. The other was pre-IRA, and the battery was charged with more than 25% grid power." [2]

"The only deal I have seen with recapture is the result of a major hail storm. Although the intensity and frequency of these storms seem to be increasing, there haven't been many that create sufficient damage to classify as a recapture event for tax purposes."

Weather is among the most commonly cited reasons for a recapture event, accounting for 60% of the recapture events advisors had observed. Hail, in particular, can cause damage to solar panels leading to them being removed from service or replaced. Minor damage that may be repaired need not trigger a recapture incident, but damage that leads to all or part of a facility being taken out of service could trigger recapture. The project owner (the transferor, in a transfer deal) has some discretion in determining when damage is significant enough to constitute a recapture event. As detailed in a blog post by the law firm Norton Rose Fulbright, "The IRS has an administrative practice that if the project is partially damaged and the necessary repairs are made for it to be returned to service that no recapture is triggered." However, there is no time period of how long a project owner has to repair the project, and the cost of repair is not ITC eligible.

Project owners account for the risk of weather-related damage in a few ways. First, they obtain property and casualty (P&C) insurance to cover the cost of replacing damaged equipment (though some insurers decline to cover catastrophic weather events, such as named storms). If P&C insurance is not sized to reflect a recaptured tax credit benefit, tax credit insurance is commonly obtained to cover the gap.

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two of the historical recapture circumstances cited by advisors have been resolved since the passage of the IRA. 1) The IRS has made clear that disposition of a partner's interest in a project does not trigger recapture to a tax credit buyer in a transfer transaction. 2) Stand-alone batteries are newly-eligible for the ITC and do not need to demonstrate that they are integral to a solar energy project in order to generate tax credits. Consequently, charging a battery with grid power no longer would sever the battery's ITC qualification.

Buyers manage their exposure to recapture most commonly by requiring the tax credit seller to procure third-party insurance to cover the risk of recapture. Crux has found in our 2023 Market Intelligence Report, derived from more than $3.5 billion in tax credit deals, that nearly all ITC transfers incorporate either tax credit insurance (75%) or indemnification by the seller/guarantor (20%).

Advisors' notes regarding recapture:

> **"The main things that get heavily scrutinized during due diligence are facts and circumstances that could trigger a recapture. From a negotiation standpoint, heavily negotiated points are related to the protections provided in the event of a recapture. Everything else is more light touch and check the box items."**

> **"A challenging aspect of due diligence in ITC deals is calibrating the appropriate amount of project/commercial due diligence as it relates to a possible recapture event. As counsel, we always want to do more review and analysis."**

> **"Non tax-related diligence [is] limited to looking for showstoppers or other things that would suggest that the asset is at risk of immediate recapture (due to something like a bad title)."**

03 Due diligence process and review

Advisors can occupy different roles in the course of a transaction due diligence process. Legal advisors are engaged by the buyer to conduct legal due diligence and render an opinion related to questions of law. In the year since transferability has taken effect, it has become increasingly common for buyers to lean on their legal advisors for tax, legal, and financial diligence. Tax advisors may be engaged by buyers to provide a detailed tax memo (if not provided by a law firm), as well as review cost segregation and other sell-side diligence materials. If the seller obtains tax credit insurance, the insurer will perform their own due diligence via the underwriting process. Financial firms will conduct due diligence related to making any investment in a project (whether or not related to the tax credits).

Surveyed advisors provided detailed analysis of the importance of two dozen common due diligence items that they typically rely upon during their review. We organized the most common due diligence items into five categories:

1. **Most heavily reviewed items**

In almost all cases, advisors rely on these items to inform their understanding of the key transaction risks. These items tend to be fact-based and closely related to determining a project's eligibility to generate tax credits, the qualification for any bonuses, the risk of recapture, and the tax credit cost basis (where applicable).

2. **Legal memos or opinions**

These are less likely to be reviewed by the buyer's legal counsel in a tax credit transaction, particularly when they are from seller legal counsel. However, other advisors — including tax advisors, insurers, and financial advisors — indicate that they are very likely to review these items, including in depth, when conducting their due diligence process.

3. **Circumstantially important items**

These items are important to inform advisors' understanding of key tax credit/transaction risks, the viability of newly eligible technologies, or items (such as legal memos or opinions) which are relied upon by some advisors but not others.

4. **Third-party technical reports**

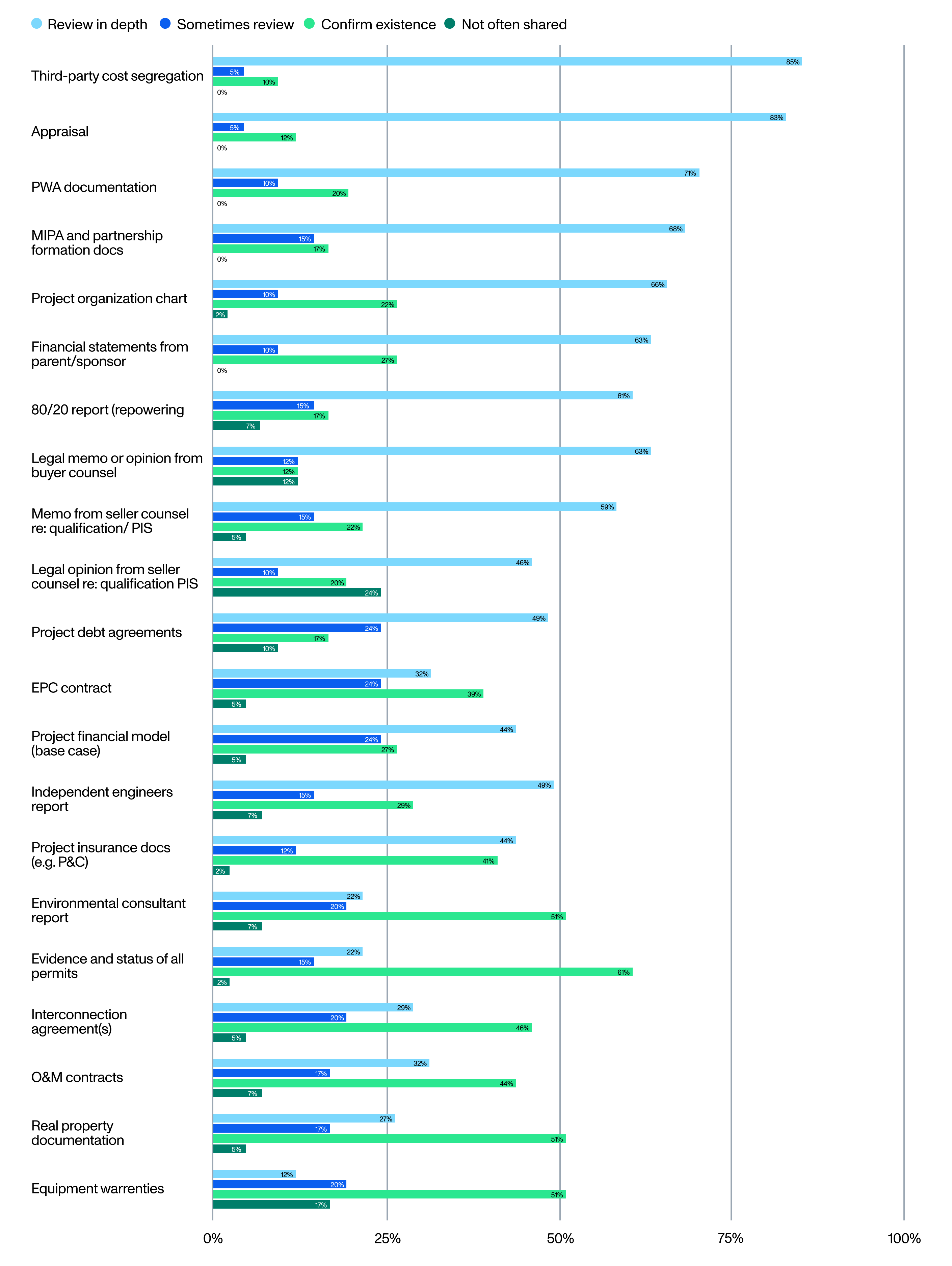
Historically, these reports have played a significant role in tax equity investments due diligence. Advisors indicate that they continue to review these reports, but are more likely to confirm their existence, particularly when compared to items in the other categories which relate directly to core tax credit risks.

5. Housekeeping items

Advisors typically confirm the existence of these items, but are much less likely to review them in depth. These items are important to ensure the veracity of a project — interconnection agreements, offtake agreements, evidence of permits, among others — but advisors appear to recognize that in many cases these items are not likely to materially inform core tax credit risks.

Advisors indicated that all items are important, but they are not equally important to all advisors. Advisors in our survey appear very comfortable with the distinctions between a tax equity transaction and a tax credit transfer. The list of due diligence items overlaps significantly with a tax equity transaction, but the level of review is significantly reduced. For example, in a tax equity transaction, third party reports such as an independent engineers report or environmental report, are typically reviewed in depth. In a tax credit transfer, advisors are much more likely to confirm the existence of the item instead.

Due diligence items in order of depth of review



Most heavily reviewed items:

Advisors indicate that they will closely scrutinize these items in all cases where they are relevant. These items pertain directly to the core risks managed in the due diligence process: cost basis, tax credit eligibility and eligibility for bonus adders, recapture, and the ability to indemnify the tax credit buyer against these risks.

Determining cost basis for an ITC is among the most essential due diligence objectives, particularly when a step-up is included. Advisors indicate that they conduct an in-depth review of the **third-party cost segregation report** (85% of advisors) and **appraisal** (83% of advisors). Items like a **Membership Interest and Partnership Agreement (MIPA) or partnership formation** documents substantiate a third-party investor's degree of capital risk (and therefore the independence of an appraisal), and are reviewed in depth by 68% of advisors.

Advisors evaluate recapture risk in a variety of ways, including reviewing the **organization chart** for a project and its owners/investors. **Financial statements** can characterize how effectively a project can navigate disruptions without triggering a recapture event (reviewed in depth by 66% and 63% of advisors). Advisors indicate that these items are reviewed in most cases, including for ITC deals (where recapture is a factor) and for PTC deals (where it is not).

Eligibility and qualification can be assessed through a review of **Prevailing Wage and Apprenticeship** (PWA) documentation, which 71% of advisors review in depth. A large share of tax credit transactions include the PWA bonus adder, which aligns with the level of attention advisors report they give to these items. PWA can be substantiated in a variety of ways, and it is increasingly common for PWA verification provisions to be written into a project's Engineering Procurement and Construction (EPC) contract. If a project expects to claim other bonuses, such as the Domestic Content bonus or the Energy Communities bonus, items that substantiate eligibility will likely be reviewed in depth by advisors, as well. New domestic content safe harbor guidance was released by the IRS in May 2024, which may somewhat ease the process of demonstrating eligibility for that bonus.

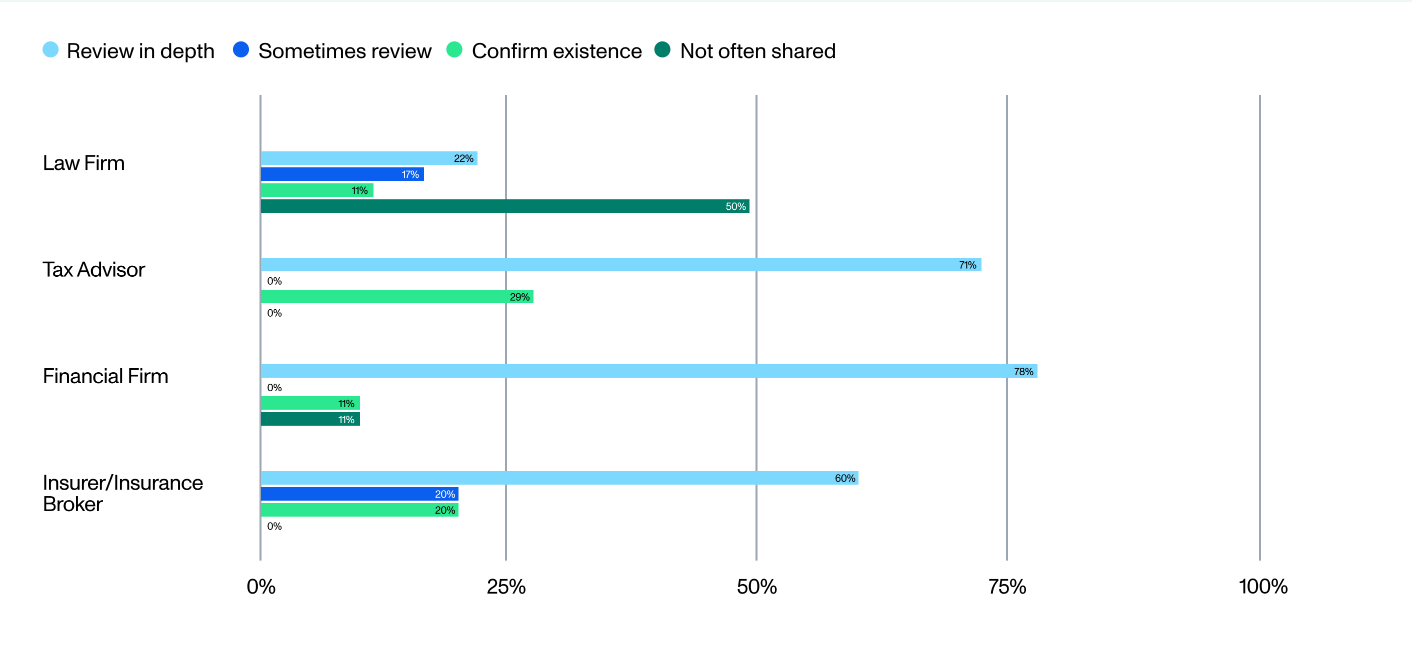
Finally, in the case of a project repowering, an **80/20 report**, or a repowering report, receives an in-depth review by 61% of advisors (in the situations where that applies). These reports are relevant in the scenario that an existing project is repowered, and the owner must demonstrate that the fair market value of the repurposed/previously existing equipment does not exceed 20% of the value of the repowered project.

Legal memos and opinions:

Reliance upon legal memoranda and opinions varies significantly among parties engaged in due diligence work. Memos can include key details about a project including a description of how a it qualifies for the tax credits it intends to transfer, as well as any bonus adders. Opinions will rely upon an interpretation of the law to reach a conclusion.

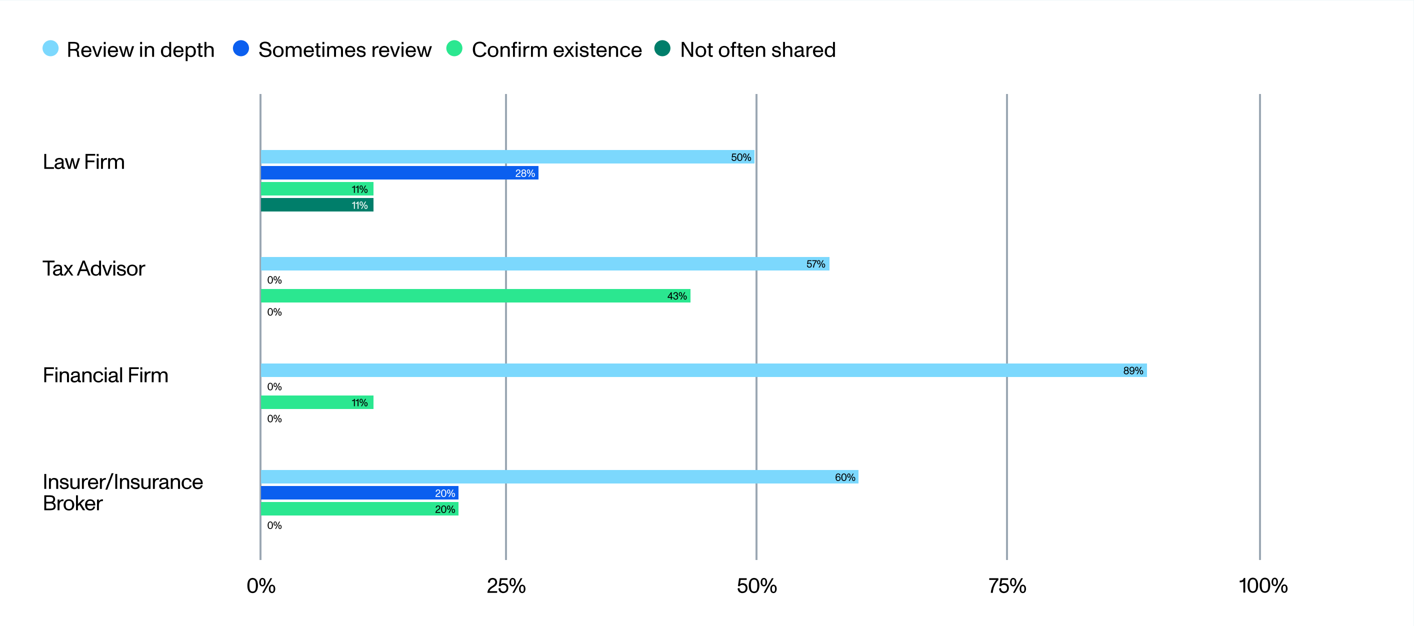
Law firms engaged in due diligence on behalf of a tax credit buyer indicate that they rarely utilize opinions prepared by seller counsel. Nearly 50% of law firms indicate that the seller's legal opinion is not a required item for due diligence. However, it is much more common for other advisors, including tax advisors, financial advisors, and insurers/insurance brokers, to review the legal opinion in depth as part of their process.

Figure 3.2 Review of seller legal opinions as an element of transaction due diligence



Seller legal memos are a somewhat different story. 90% of legal advisors indicate that they do review the seller's counsel legal memo, though they are the least likely among all the advisors to review it in depth, with only 50% saying they do so.

Figure 3.3 Review of seller legal memoranda as an element of transaction due diligence



Sellers should anticipate that a tax credit buyer and their advisors will expect to see a legal opinion and memo from their counsel.

Circumstantially important items:

Due diligence processes are fact-specific, and advisors have different roles and responsibilities in the process.

Whether a project has been placed in service at the time of the tax credit sale affects the scope of diligence. As one advisor shared, “It is important to consider the project’s placed in service date while performing diligence. If a project was placed in service [last year], diligence can occur much quicker as most items would have already been met and there is a less-risk approach done.”

Items which take on greater significance for projects which are not yet in service can include the **EPC contract** (reviewed in depth by 32% of advisors) which help illustrate a project's viability from a technical economic point of view. Advisors generally recognize that these items are more likely to impact a tax credit buyer if a project is under construction or, potentially a newly eligible technology type without an established track record. Financial information, including **financial models and project debt agreements** (reviewed in depth by 49% of advisors) take on additional importance for smaller developers, who may lack a robust balance sheet, and where the financial sturdiness of the project helps inform issues like recapture risk.

Third party reports:

The review of third party reports in a tax credit transaction is typically lighter touch than in a tax equity partnership due diligence process. Advisors indicate they are more likely to confirm the existence of certain common third party reports rather than reviewing them in depth. **Environmental consultant reports** receive a cursory review by 51% of advisors and in-depth review by only 22% of advisors. **Insurance documentation** and an independent engineers report also receive a closer review. Advisors indicate they will confirm existence for insurance documentation 41% of the time, and review in depth 44% of the time.

Independent engineers' reports tend to be the most heavily reviewed of all third party reports. About 49% of advisors review these reports in depth, while 29% indicate they confirm the existence of these reports but don’t review them in depth.

Housekeeping items:

Advisors indicate they often do a lighter touch review of many common items and agreements that a project may expect to provide. These items typically feature heavily in tax equity due diligence and are still a required part of a tax credit transfer, but sellers would not necessarily anticipate major questions arising from these items unless they are significantly incomplete or non-standard.

Evidence and status of permits (61% confirm existence) receives the lightest touch from advisors, though it is still required in due diligence in nearly all cases. Advisors are more likely to confirm the existence of a variety of items, such as **interconnection agreements** (46%), **operations and maintenance** (O&M) contracts (44%), **real property documentation** (51%) and **equipment warranties** (51%).

These items all remain an important part of the due diligence process. With exception of equipment warranties, which 17% of advisors indicate are not often shared, survey respondents report that they do review each item in nearly all cases, but that the level of review is simply a lighter touch than for items that more directly inform the primary risks of a tax credit transaction.

Key negotiated terms:

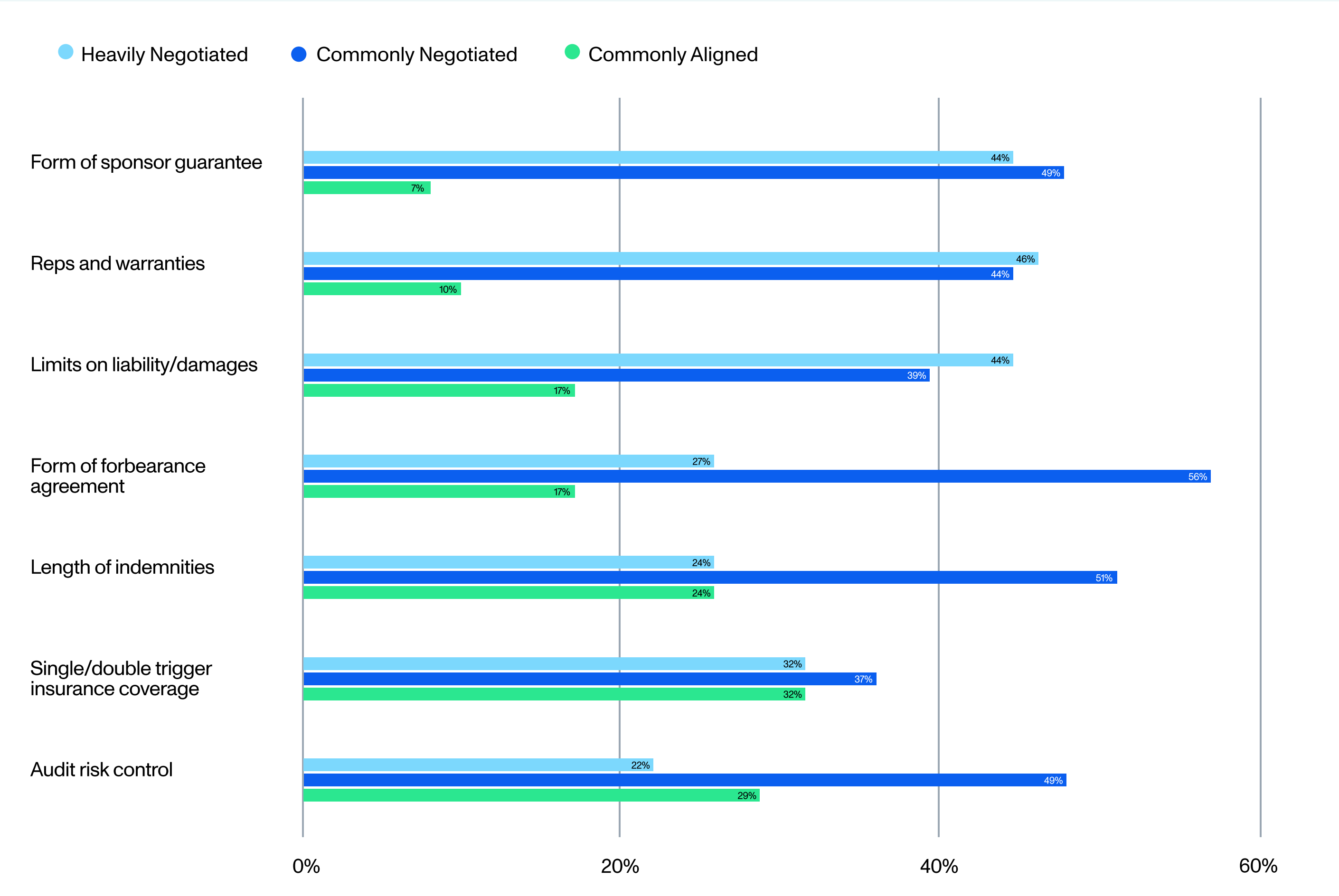
Key contract terms range from most heavily negotiated to most standardized. Terms that appear standardized are still very important and impactful to the buyer, but advisors indicate that parties are more likely to be aligned on these terms.

Advisors indicate that they tend to heavily negotiate key terms like the **form of sponsor guarantee, limitations on liability and damages,** and **representations and warranties**. These elements of the transaction agreement likely include the key risk management elements for the buyer, in addition to third-party insurance, if applicable. Risk mitigation is still situation specific, and advisors clearly indicate that they are likely to approach deal terms for each deal with the facts and circumstances of the deal in mind.

Advisors indicate they are less likely to negotiate heavily over terms such as the **form of forbearance agreement** between the seller and their lender(s) and the **length of indemnities**. Nonetheless, most advisors say that they do negotiate with the seller over these terms, suggesting that they are non-standard, but not the most heavily disputed deal terms.

Items which appear most likely to be standard, or upon which parties are most commonly aligned, include **audit risk control** and the presence of **single or double trigger insurance coverage** (single trigger insurance policies are most common). Insurance coverage provisions are generally negotiated between the seller and the insurer, though buyers will frequently provide feedback on the insurance policy. The plurality of advisors note that audit control is still commonly negotiated in many transactions. However, it was rare for advisors to indicate that they were commonly aligned on any of the deal terms, so notable when they did indicate as much.

Table 3.4 Ranking of most and least heavily negotiated deal terms



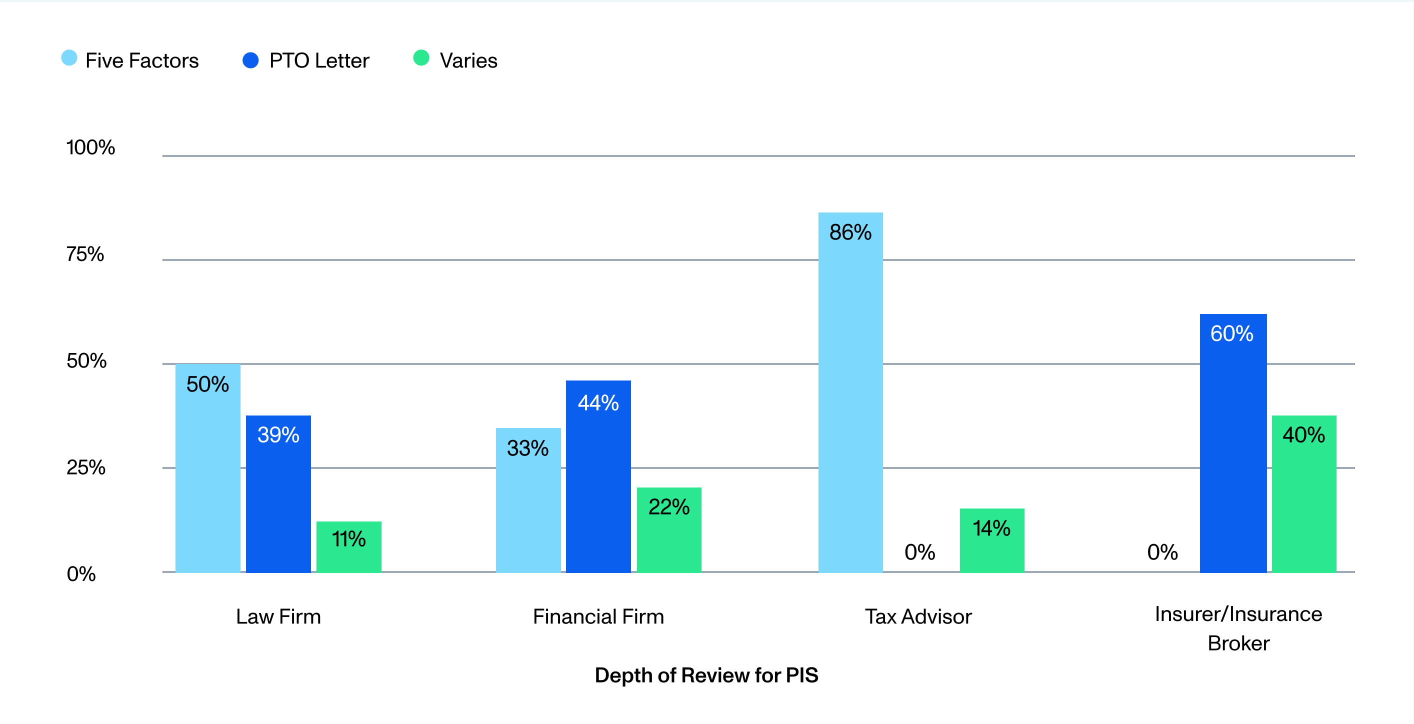
Placed in service (PIS) documentation

Determining the moment when a project is placed in service is critically important, but advisors at different diligence levels rely on different proof points to evaluate PIS. For many advisors, they rely upon a letter or notice from the utility called a permission-to-operate letter or notification.

Alternatively, the IRS has defined five factors that constitute a placed-in-service test. Those five factors are: 1) the receipt of all permits and licenses; 2) taxpayer control of the facility; 3) completion of preoperational testing; 4) commencement of operations (or operational readiness); 5) interconnection to the power grid.

Tax advisors are by far most likely to do the 5 factor test. 86% will do 5 factors and 0% say they will rely on the PTO letter. Legal advisors and financial advisors indicate they use the 5 factor test <50% of the time, lean more on PTO. Insurers on the other hand do not do the 5 factor test, 60% rely on PTO letters. Another 40% lean on the tax memo or say it varies.

Figure 3.5 Reliance on five factor test versus PTO letter by advisors



Conclusion

Transferable tax credit transactions are simpler than traditional tax equity partnerships, but successful transactions still require careful diligence. Law firms and tax advisors are critical partners to buyers and sellers in this new market.

This paper offers a framework for identifying risk in transferable tax credit transactions. As a general matter ITC transactions tend to incorporate more risks and a higher level of due diligence than PTC transactions, though many diligence items are common across both transaction types. Transaction risks can be summarized briefly as risk of recapture, project or tax credit cost basis, eligibility, and qualification. While buyers need to be attendant to these risks, they are significantly more circumscribed than those inherent to investing in a traditional tax equity partnership. Diligence on such deals looks much more like loan origination or preferred equity investment. Transferable credit transactions are simpler and present considerably more opportunity for standardization.

Early in the life of a new market, risk management standards are subjective. Over time, markets develop standards to evaluate and better manage risk. Insurance, guarantees, and structure help simplify underwriting by mitigating certain risks, opening up a product to a larger base of buyers. Written standards and conventions emerge. This process accelerates as purpose-built technology provides tools to transact and manage investments. We've seen this evolution in the development of platforms to syndicate commercial loans and real estate, to name a couple. This process feeds a virtuous cycle.

The market for transferable tax credits is new, but has formed very quickly.

Transparency and early alignment in the due diligence process is critical as we move toward a deeper, more liquid, and more efficient market. Misalignment between buyers and sellers can create headwinds for a successful deal. Advisors note that due diligence issues were responsible for around 40% of transaction delays and derailments. Advisors also emphasize the importance of education and preparedness for buyers and sellers into transaction risks and appropriate due diligence strategies.

Crux's mission is to create a more efficient and interconnected market for sustainable finance. We wrote this white paper as an early step in helping the industry move towards more standardization in diligence, through more codification and eventually pricing of risks.

From these survey findings, Crux has developed a market-validated due diligence checklist by transaction type — covering ITCs, non-manufacturing PTCs, and advanced manufacturing PTCs (§45X) — to aid in the preparation for and execution of tax credit transactions. Developers and manufacturers, tax credit buyers, and intermediaries on the Crux platform utilize this checklist to effectively prepare for and efficiently execute tax credit transactions.

As of June 2024, Crux has over $11 billion of credits listed for sale and $4 billion of bids have been placed year to date. As the volume of deals closed on Crux continues to accelerate, we gain more perspective on what leads deals to succeed or fail. Crux is designed to streamline the transaction process and ensure that risks are identified and mitigated effectively. **Get in touch with us today to learn more about how Crux can support your approach to the tax credit market.**

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Dig deeper into the findings

Join Crux Co-founder & CEO Alfred Johnson live for a discussion on these insights and their implications for the transferable tax credit market.

Tuesday, June 25 at 1pm ET

Register at heatmap.news/crux-event