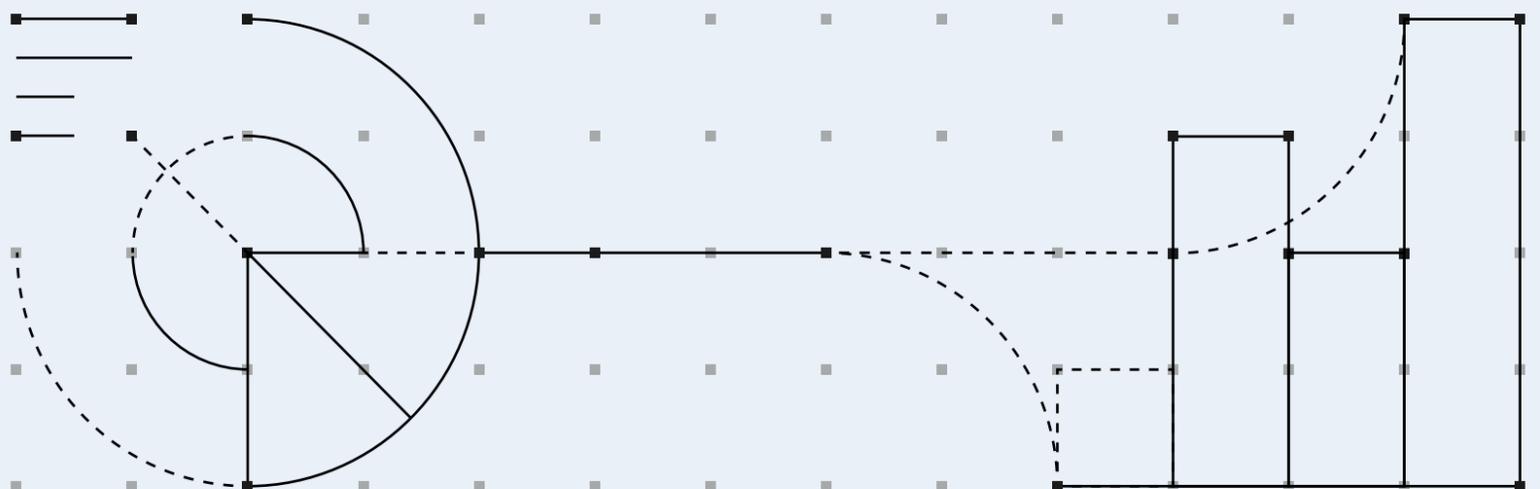


The Connected Equity Blueprint

carta

Why relying on spreadsheets for cap tables and waterfall models creates unnecessary risks, and what steps deal teams and CFOs should follow to achieve perpetual confidence.

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Executive overview

The cap table and the waterfall model are two critical tools for any corporations backed by a private equity firm—or for any LLCs seeking PE investment.

An accurate waterfall model can't exist without an accurate cap table: It's the data within the cap table that defines how any profits from an exit will be distributed. Yet the cap table and the waterfall model are often built and managed in entirely separate spreadsheets that can require significant manual oversight. For company leadership or a PE deal team, the disconnected and manual nature of these models can create a cascade of problems:

- Waterfall models that are managed by constantly updating an Excel spreadsheet can be **inaccurate**.
- The process of building and maintaining these unconnected systems is **inefficient**, relying on constant perfection from a human employee who is juggling many other tasks.
- Errors in translating the cap table into a waterfall can lead to **unanticipated risks** and a lack of compliance, such as miscalculated vesting or missing documents.
- Errors also **erode credibility and confidence** from the company's sponsors and its board.
- They can also complicate or **delay preparations for an exit**, whenever that exit may come.

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Executive overview (CONTINUED)

Increasingly, deal teams and company CFOs are adopting a different solution: a single, natively connected system where the company's cap table and waterfall are dynamically linked. It's the most efficient way to eliminate reconciliation risks, increase confidence, and operate at the level your sponsors expect.

For executive and dealmakers, this industry push toward a connected system for managing cap tables and waterfalls is driven by three key principles:

■ KEY PRINCIPLES

- 1 Principle 1: The waterfall is an output, not a separate model
- 2 Principle 2: Manual waterfalls can go wrong
- 3 Principle 3: Readiness for scrutiny is key

■ PRINCIPLE 1

The waterfall is an output, not a separate model

Companies that don't use a sophisticated cap table management tool typically maintain a spreadsheet waterfall model that attempts to mirror the latest version of the cap table. A range of stakeholders at the company and its sponsor may have responsibilities related to the maintenance of this model, including financial analysts, the controller, the VP of finance, the CFO, and in-house counsel.

Suppose a change of your ownership data occurs. An analyst updates the spreadsheet manually. Others in the finance department double-check the work, examining both the initial update to the spreadsheet and any implications it might have elsewhere in the model. Then they triple-check it. Then they send it to their law firm or investor relations team to check again.

That process can take days. And it happens every time there's a new financing, change in ownership, or upcoming payout.

Waterfall distribution models are governed by the legal and economic terms outlined in your operating agreement, such as liquidation preferences, vesting cliffs, class-specific caps, contingent value rights (CVR), and proration rules. If your cap table is modeled in a basic spreadsheet, these terms must be manually coded (and properly translated) into the waterfall analysis. That's a lot of complexity for highly paid teams to manage and oversee manually.

When the cap table is live, dynamic, and connected to the waterfall model, then the waterfall analysis becomes an automatic, real-time output of the data and rules set in a company's governing documents.

The waterfall is an output, not a separate model (CONTINUED)

■ LEGACY SYSTEMS

Ownership data must be rebuilt and justified for every new model and spreadsheet.



When a new grant, conversion, or financing event occurs, all spreadsheets must be separately updated and confirmed.



Each update to the cap table or waterfall model leads to a new version. Key stakeholders don't always see the same data.



■ CONNECTED EQUITY

No more duplicated effort.

Your platform already knows who owns what, and under what terms.



No more reconciling between systems.

Updates to data flow instantly and directly across all models.



No more checking versions.

Everyone, from the CFO to the deal team, references the same model.



In this scenario, the logic in your exit waterfall model lives in the same system as your equity data. That means operating agreement terms like liquidation preferences, participation rights, and CVRs are codified once and enforced every time.

With this approach, payout modeling is no longer a separate exercise, but a part of your core infrastructure. In the same way that double-entry bookkeeping ensures that a company's debits and credits always align, a connected equity platform ensures that a company's cap table and waterfall model are in perpetual agreement.

■ PRINCIPLE 2

Manual waterfalls can go wrong

■ SCENARIO

Jordan is an analyst on the deal team at ABC Capital who is responsible for constructing and updating a manual waterfall model for Company X, one of ABC Capital's portfolio companies.

ABC first invested in Company X four years ago. Since then, the company has made several distributions to its shareholders, and its cap table has undergone a series of changes. Jordan spends hours each week making sure that Company X's waterfall model is accurate and up to date. The model currently lives in an Excel spreadsheet with 14 different tabs. Each of these tabs includes several hundred rows of data. In total, this waterfall spreadsheet includes thousands of individual cells, each of which must always be correct if the model is to operate properly.

When running an updated waterfall analysis, Jordan encounters a problem. ABC Capital is trying to calculate the proper return of capital from its latest distribution to its shareholders, but the math isn't adding up. What's wrong? After combing through hundreds of rows in a spreadsheet, Jordan discovers that someone made an error when attempting to manually update a shareholder's total capital contributions in the spreadsheet, hitting the number five instead of the number six. This error would be impossible in a connected equity platform, where figures are automatically drawn directly from the cap table.

After fixing this error, Jordan realizes another problem. Even with capital contributions properly tabulated, the return of capital calculations are incorrect. Upon further digging, Jordan discovers that the model doesn't properly account for the different prices at which different shareholders invested. If one investor acquired equity in Company X at \$3.82 per share with a 2x liquidation preference, and another investor bought in at \$4.90 per share with no liquidation preference, what proceeds should each investor receive? The model isn't clear.

Manual waterfalls can go wrong (CONTINUED)

In this example, Company X and its sponsors devoted untold hours to creating a massive Excel workbook with thousands of interconnected data points for the purpose of easily calculating waterfall outcomes. And this large expenditure of time resulted in bad information: Even with this ungainly spreadsheet, the company and the firm are still in the dark.

In this sort of disconnected system:

Reconciliation becomes a recurring project that distracts from high-value strategic work.

Manual errors sneak in easily, so a single copied cell or misapplied preference stack can break the payout model.

There's **no clear source of truth**, which makes responding to investor questions or audit requests difficult and prone to more error.

Future planning stalls, because your key inputs (ownership and preference terms) aren't dynamically linked to your models.

In short: When your equity structure is split across spreadsheets, your strategic finance team becomes reactive, not proactive. And that manual gap can cause operational missteps or a loss of investor trust.

■ PRINCIPLE 3

Readiness for scrutiny is key

Finance teams at PE-backed LLCs and deal teams at PE firms have many different priorities and motivations that can inform which systems and tools they choose to deploy. A natively connected cap table and waterfall system makes life easier for these key decision-makers in several ways.

1 Accuracy

When ownership data must be manually layered into a spreadsheet model with complex formulas, the risks multiply quickly. An integrated system removes that friction.

- The cap table is the ultimate reference point, always up-to-date and codified.
- Waterfall analyses are an extension of source data, not a separate interpretation.
- Human error from copy-paste workflows is gone.

2 Efficiency

Whether you're scenario-modeling an IPO, secondary sale, or convertible note conversion, users of a connected cap table platform can generate waterfall charts with the click of a button. Team members can spend less time combing over hundreds of rows of spreadsheet data and more time on forecasting, integration, and value creation.

- Use instant modeling to test changes to exit values or restructuring terms in real time.
- Provide more timely answers to questions from deal teams or investors.
- Team members have more time to focus on valuable work.

Readiness for scrutiny is key (CONTINUED)

3 Risk mitigation

By automating their equity systems, companies can greatly reduce the risk that they might in some way violate agreements with investors or any relevant regulatory requirements.

- Eliminate manual processes that introduce unnecessary financial and reputational risk.
- Reduce the chance of miscalculated vesting, missing documents, or misaligned thresholds.
- Future-proof your cap table and waterfall against key-person risks and job departures.

4 Sponsor confidence

Disconnected processes create messy, inaccurate audit trails, leaving mistakes that can erode the confidence of investors and board members. If auditors or sponsors want to see your work, a connected system provides perfect transparency.

- Your model is immutably traceable back to original legal documentation.
- Cap table updates are logged and versioned over time.
- Key legal terms (liquidation preferences, non-participating, vesting, anti-dilution, participation rights, etc.) must be enforced in calculation logic.

5 Exit readiness

In board meetings, during exit processes, and in audit cycles, connected equity systems allow companies to present exit scenarios and payout data with confidence, because there's no gap between the model and the truth.

- Prepare accurate models instantly for any range of potential exit scenarios.
- Different equityholders with different rights and vesting schedules can be clearly tracked.
- Avoid last-minute scrambles when an exit process begins.

Conclusion: Applying the blueprint

You might think: “Sure, a connected system for managing cap tables and waterfalls might be helpful to a lot of finance teams at PE-backed LLCs. But I don’t need it. I built my cap table and waterfall models from scratch, I maintain them with great care, and I know every part of them, inside and out. It’s easy to envision other companies making errors in their models. But not me.”

And maybe that’s true. But even if you can guarantee that you can maintain thousands of numbers in a spreadsheet for years on end, with constant updates that must be justified across multiple systems, without ever making a single error: Why would you?

Today’s sponsors expect precision, clarity, and speed in every aspect of a portfolio company’s operations, from the tools it sells to customers to its own internal processes. In the age of AI, the incorporation of new technologies is an integral part of this new standard.

That new standard is a platform built for scale: One where your team and your sponsors can trust the data, trace the logic, and model outcomes in minutes, and where stakeholder confidence comes automatically, because it was never manually stitched together in the first place.

Carta’s key features for LLC equity management include cap table management integrated with waterfall modeling, vesting logic, and real-time payout modeling—all built by industry professionals with a combined 80+ years of experience building and reconciling high-stakes cap table and waterfall models themselves.

Elevate your cap table

Carta brings cap table, reporting, equity comp, and modeling together, making team workflows faster, accurate, and fully documented.



[Get started](#)



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