Real Estate Financial Modeling's

Joint Venture and Waterfall Modeling Bootcamp

Level 3 Certification Preparation

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Principal, Real Estate Financial Modeling

www.GetREFM.com

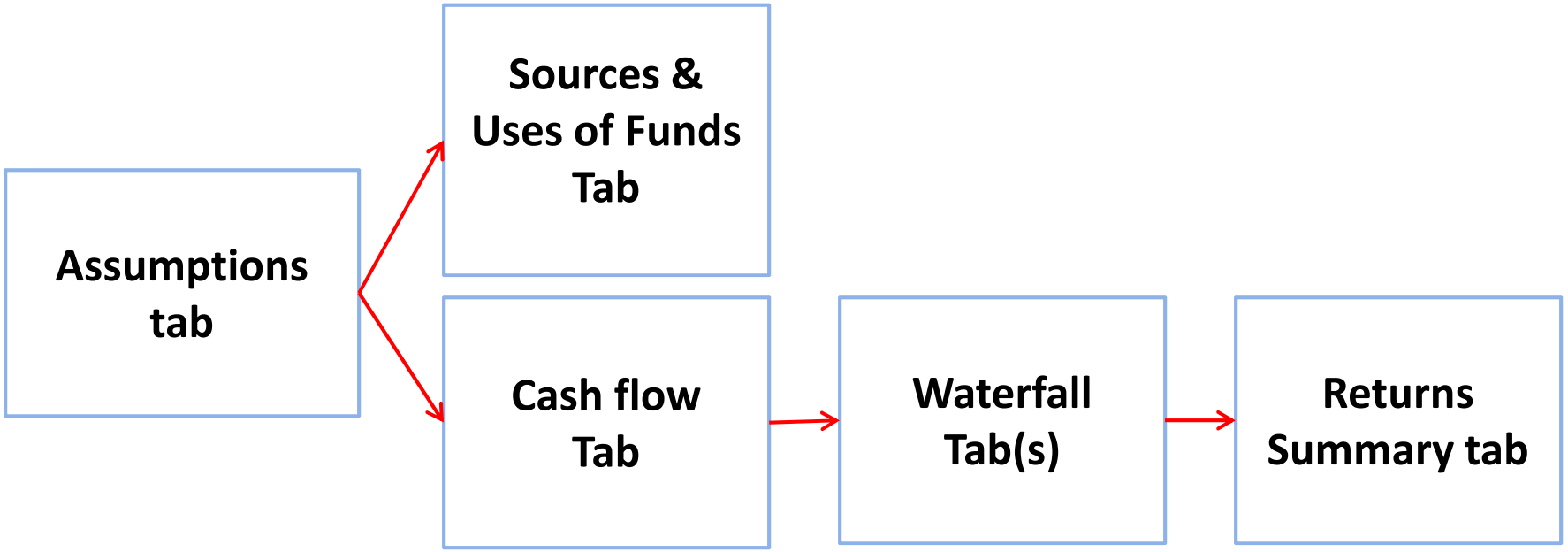
Agenda

- Rationale behind targeting disproportionate returns
- How to achieve disproportionate returns
- Preferred Returns and their variations
- Waterfall Distribution overview and Promote modeling
- Look-Back: Internal Rate of Return (IRR) and Equity Multiple
- 3-Tier Waterfall modeling
- Double-Promote, 5-Tier Waterfall modeling
- Sample Partnership Structures
- Claw-Back modeling

Spreadsheet Formatting Notes

- Inputs/assumptions are in **bold blue type**
- Formula-based outputs are in black and red
- Labels in black

Big-Picture: Spreadsheet Tab Relationships



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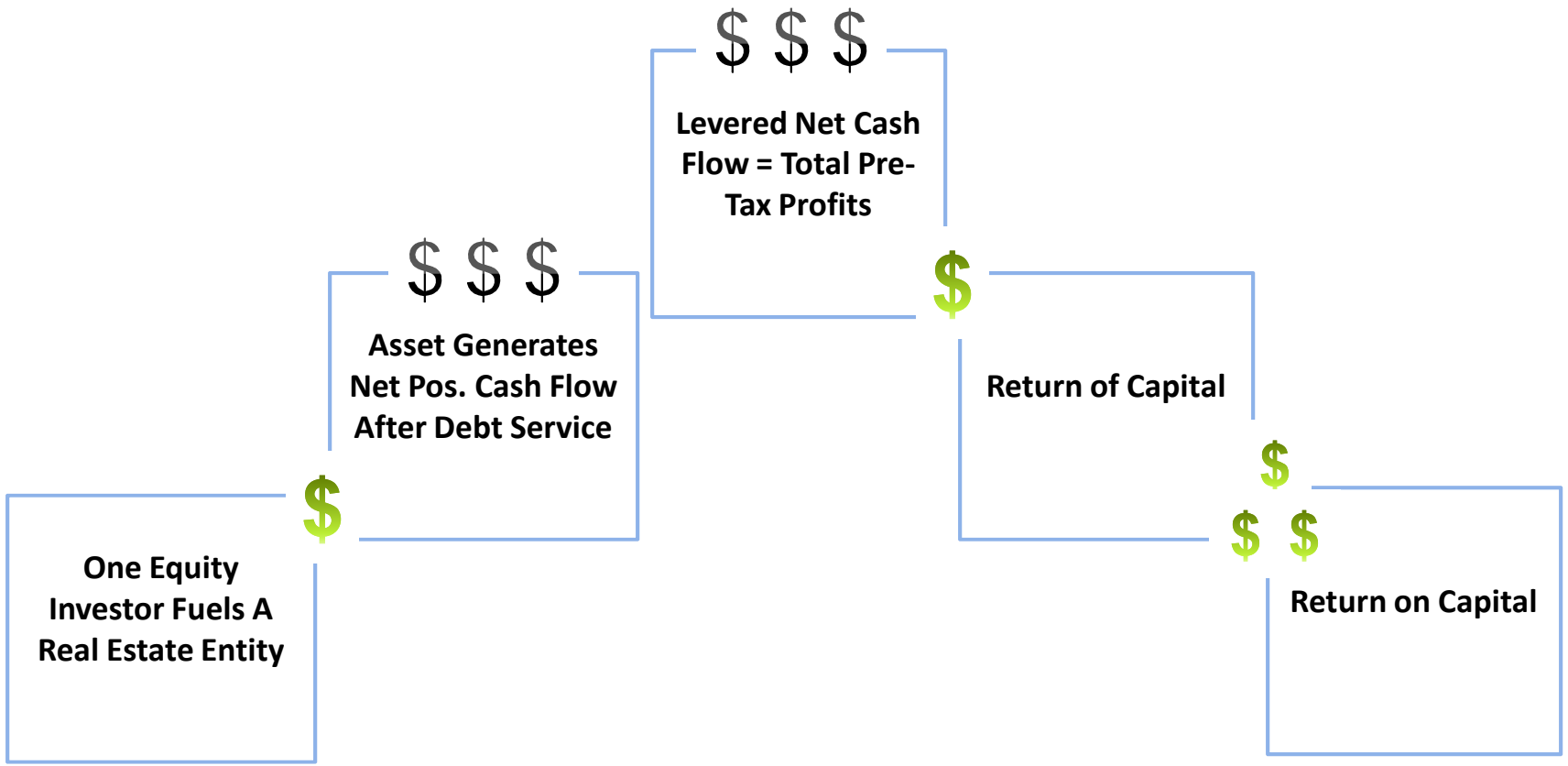
Big-Picture: One Investor



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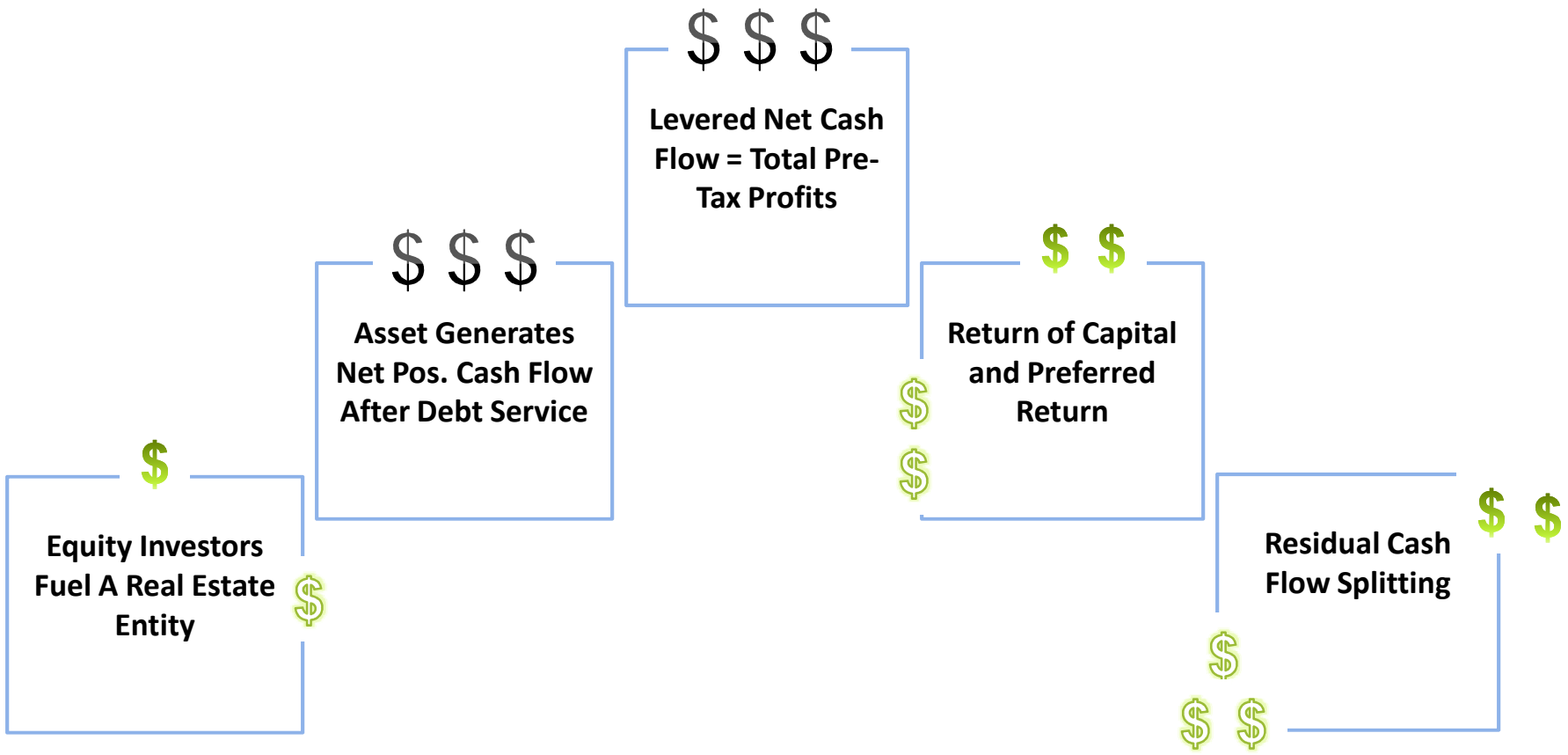
Big-Picture: Multiple Investors



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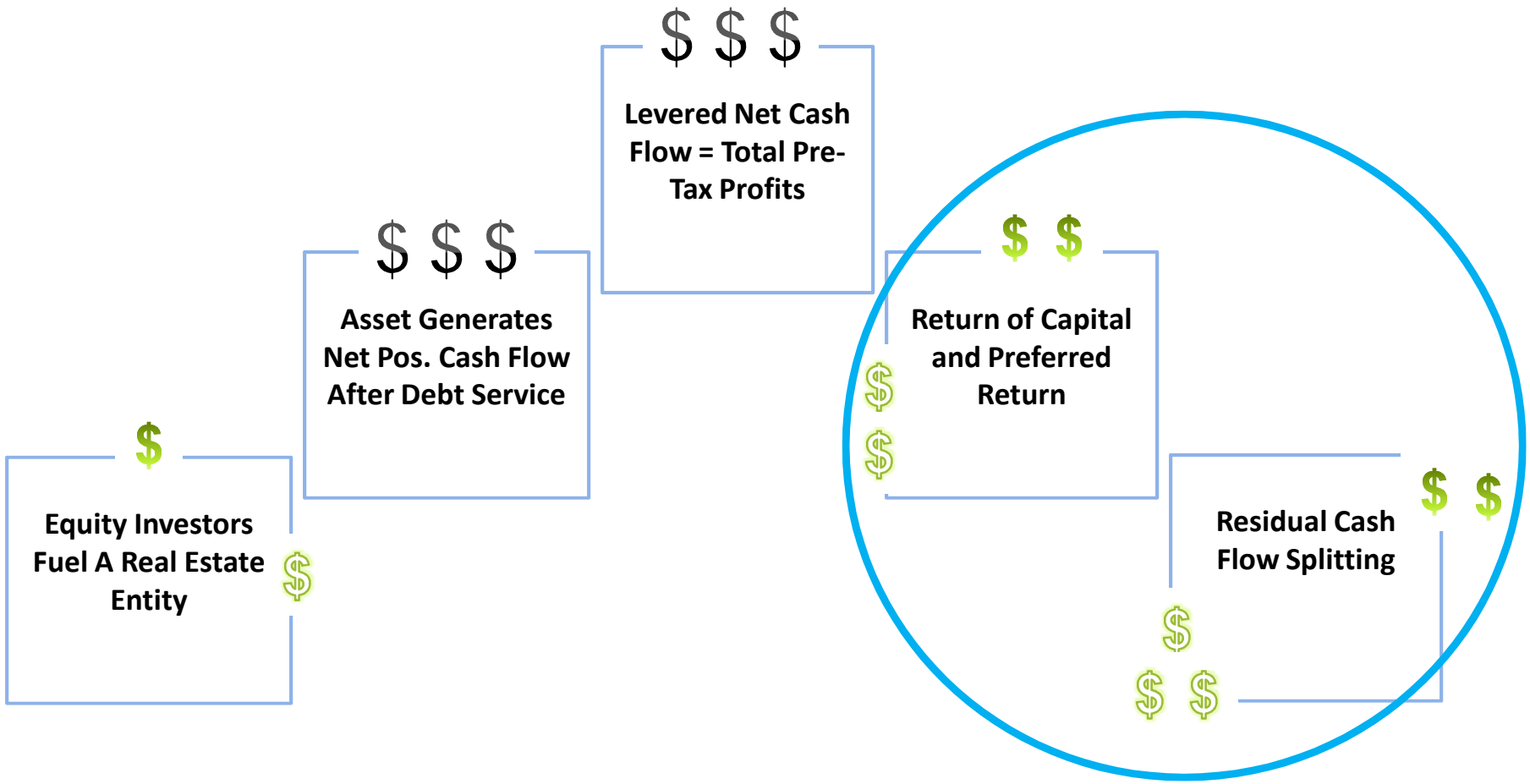
Big-Picture: Waterfalls for Multiple Investors



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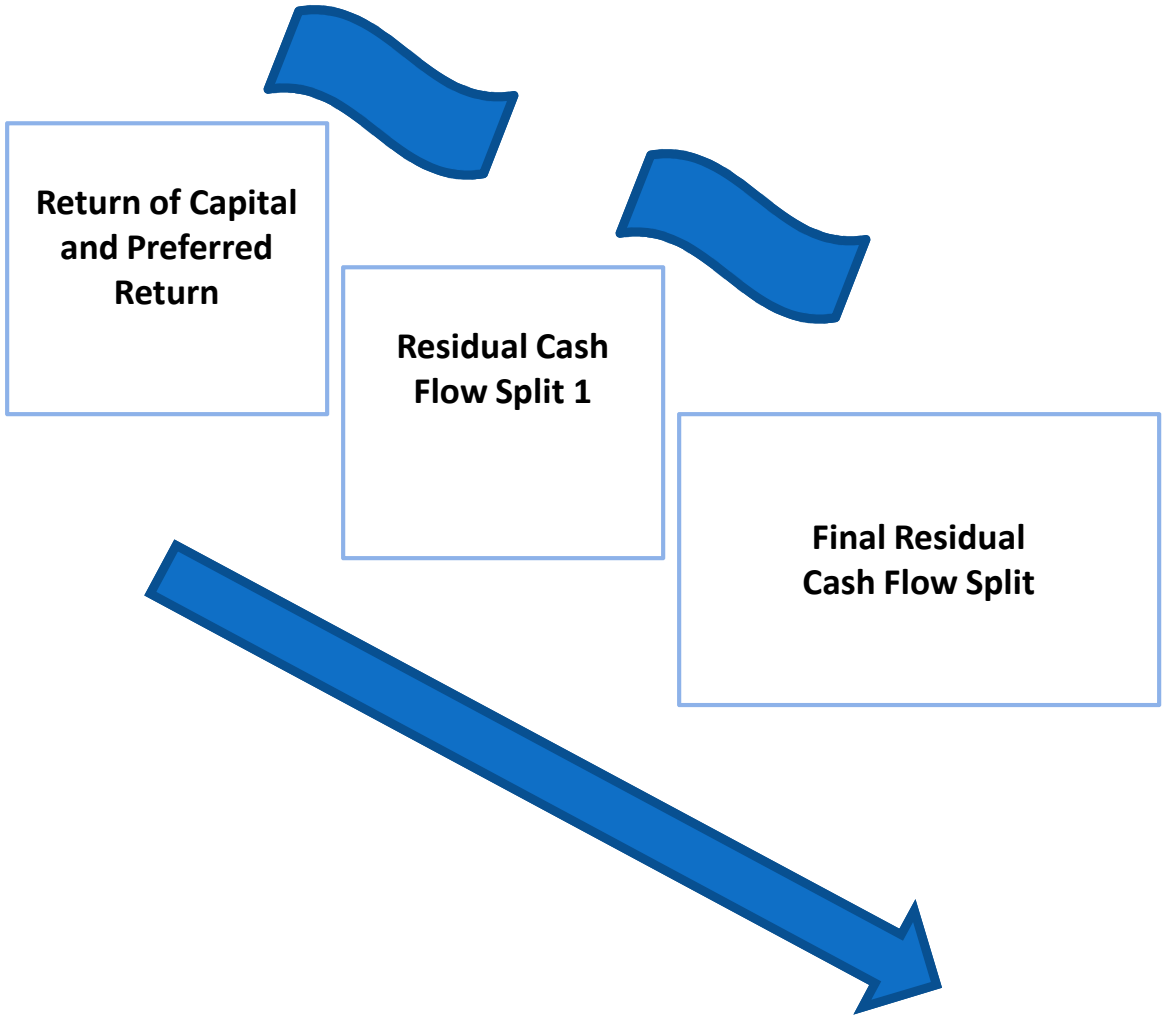
Multiple Investor Waterfall – 3 Tiers



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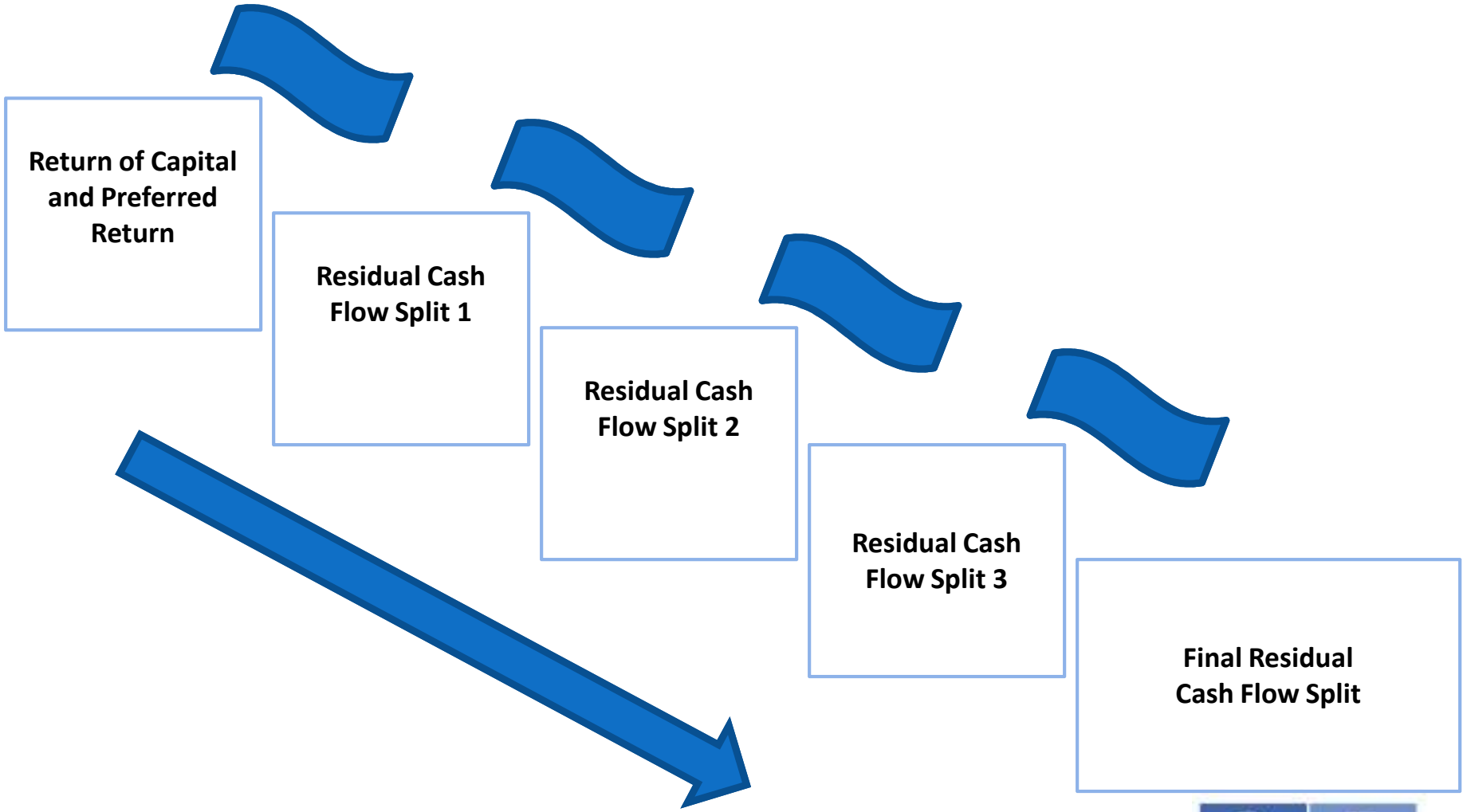
Multiple Investor Waterfall – 5 Tiers



JV Partnerships – Multiple Parties Teaming Up

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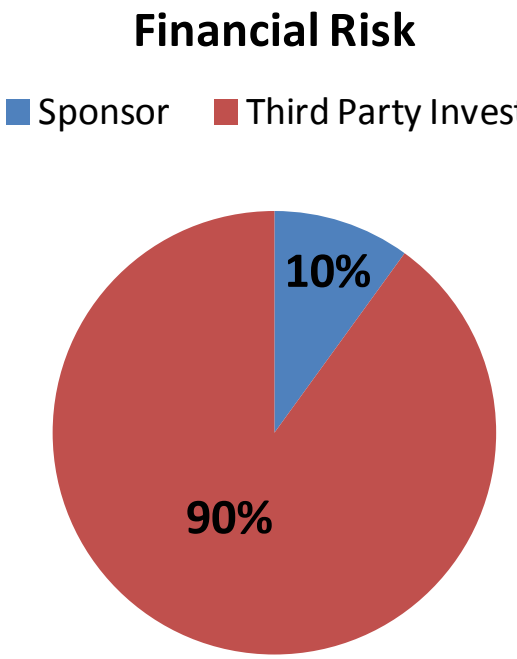
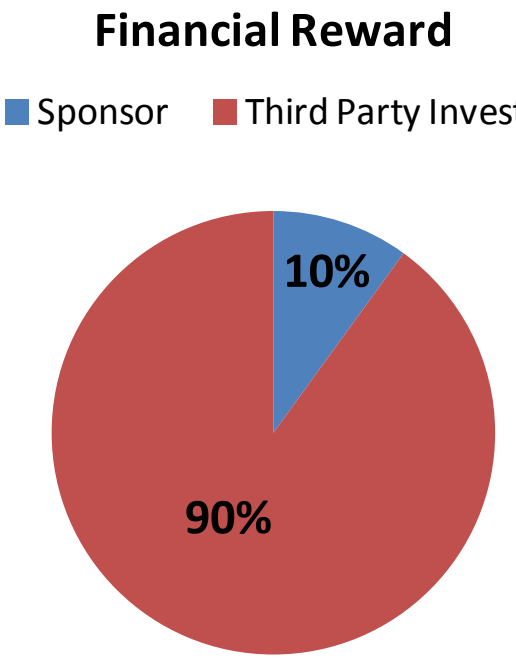
Joint Venture Partnership Cash Flow Splitting

The fundamental question:

Given how much and when cash investment goes in to the transaction from each party, when should the original capital invested, and when and how should the returns on that capital, come out of the transaction/fund to each party?

Is Proportional (Pro-Rata) Financial Reward Desired?





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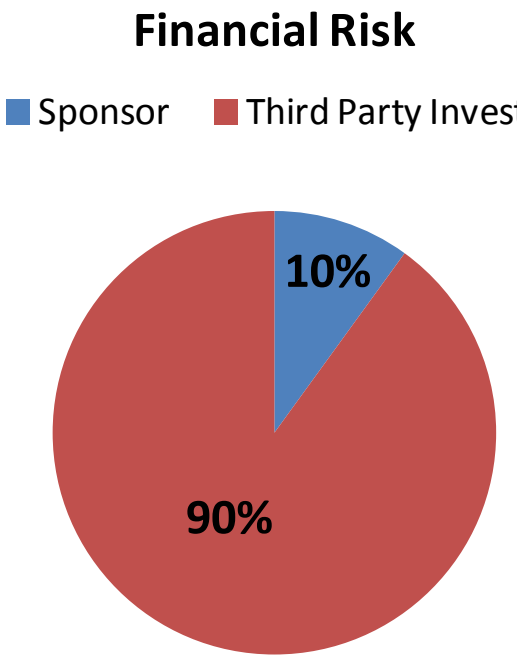
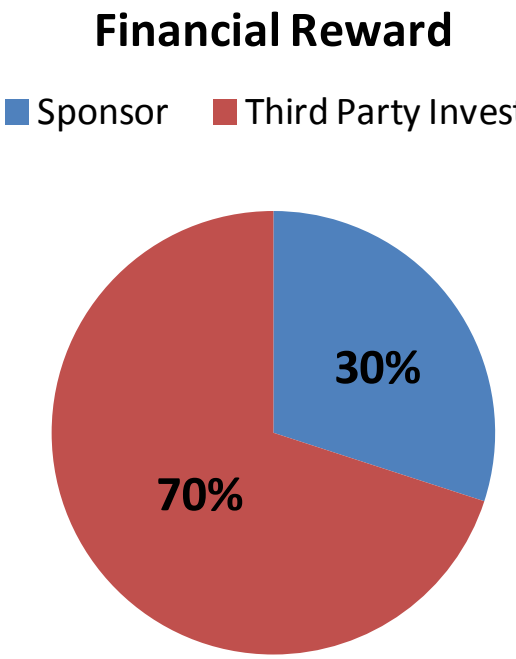
Disproportionate Reward To The Sponsor Is Market





Total Net Cash Flow is weighted disproportionately in favor of the Sponsor…

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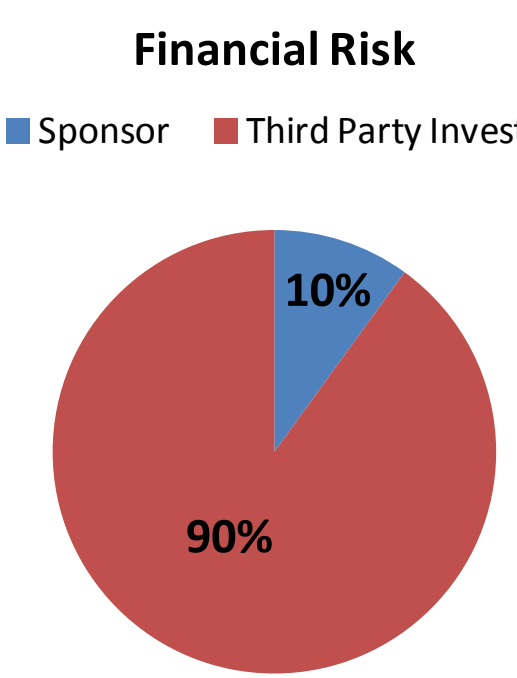
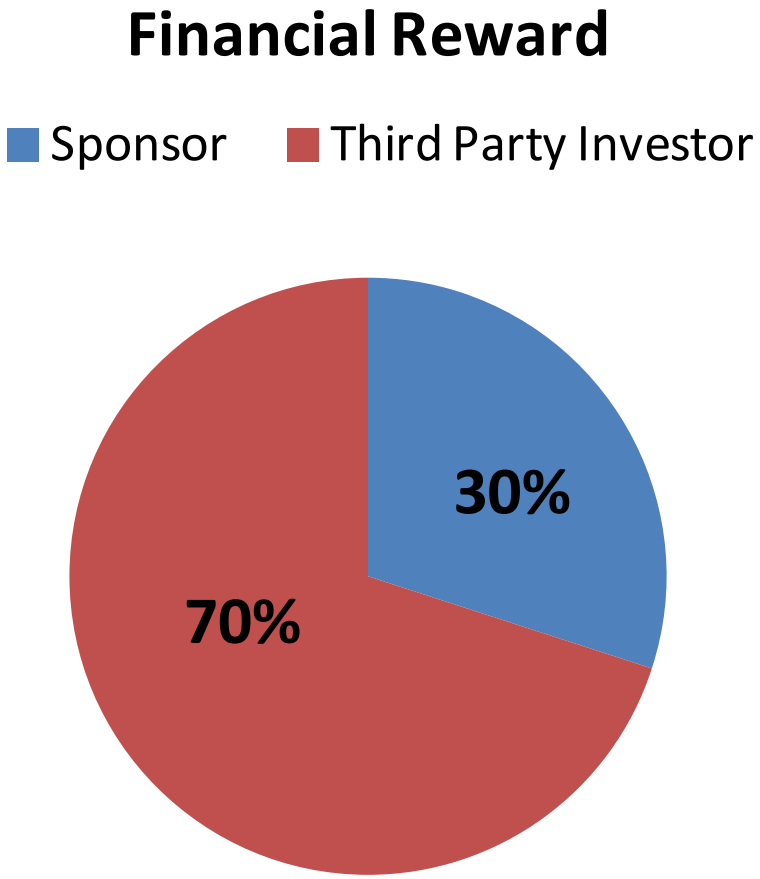
To Motivate The Creation Of A Larger Pie For All





…so that everybody wins bigger.

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How To Achieve Disproportionate Returns

- Fees to Sponsor
  - Development
  - Acquisition
  - Property management
  - Leasing
  - Asset management
  - Disposition

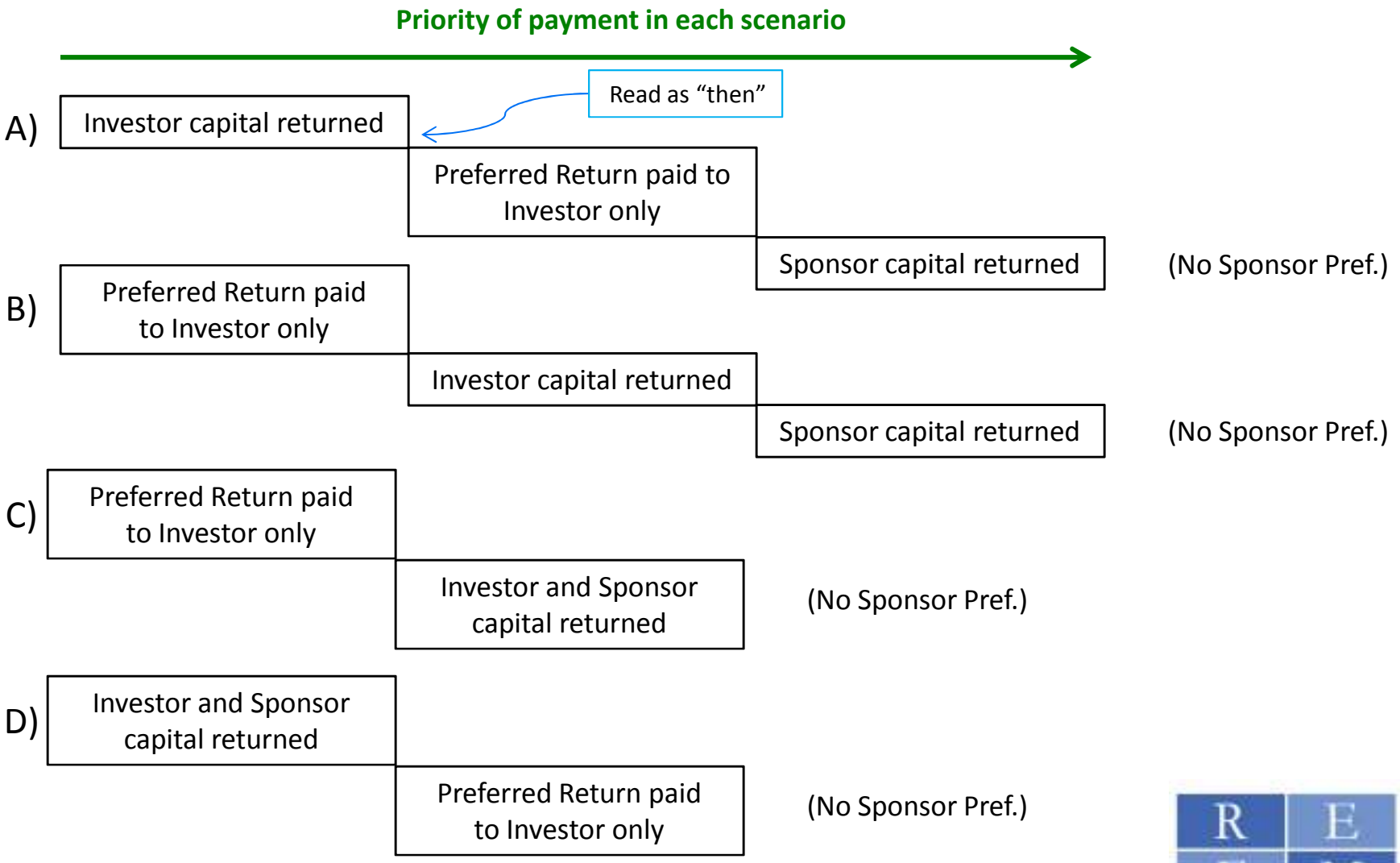
How To Achieve Disproportionate Returns

- Profit sharing based on investment performance
- What is the ideal mix?

Trade Offs For Disproportionate Sharing

- What does the Investor get in return?
  - A Preferred Return ("Pref") on the investment
    - First cash flows after return of capital go to the Investor up to a specified % return
    - Note: sometimes the Pref occurs before the return of capital
  - A "safer" (although lower) IRR

Preferred Return Variations on Priority of Payment



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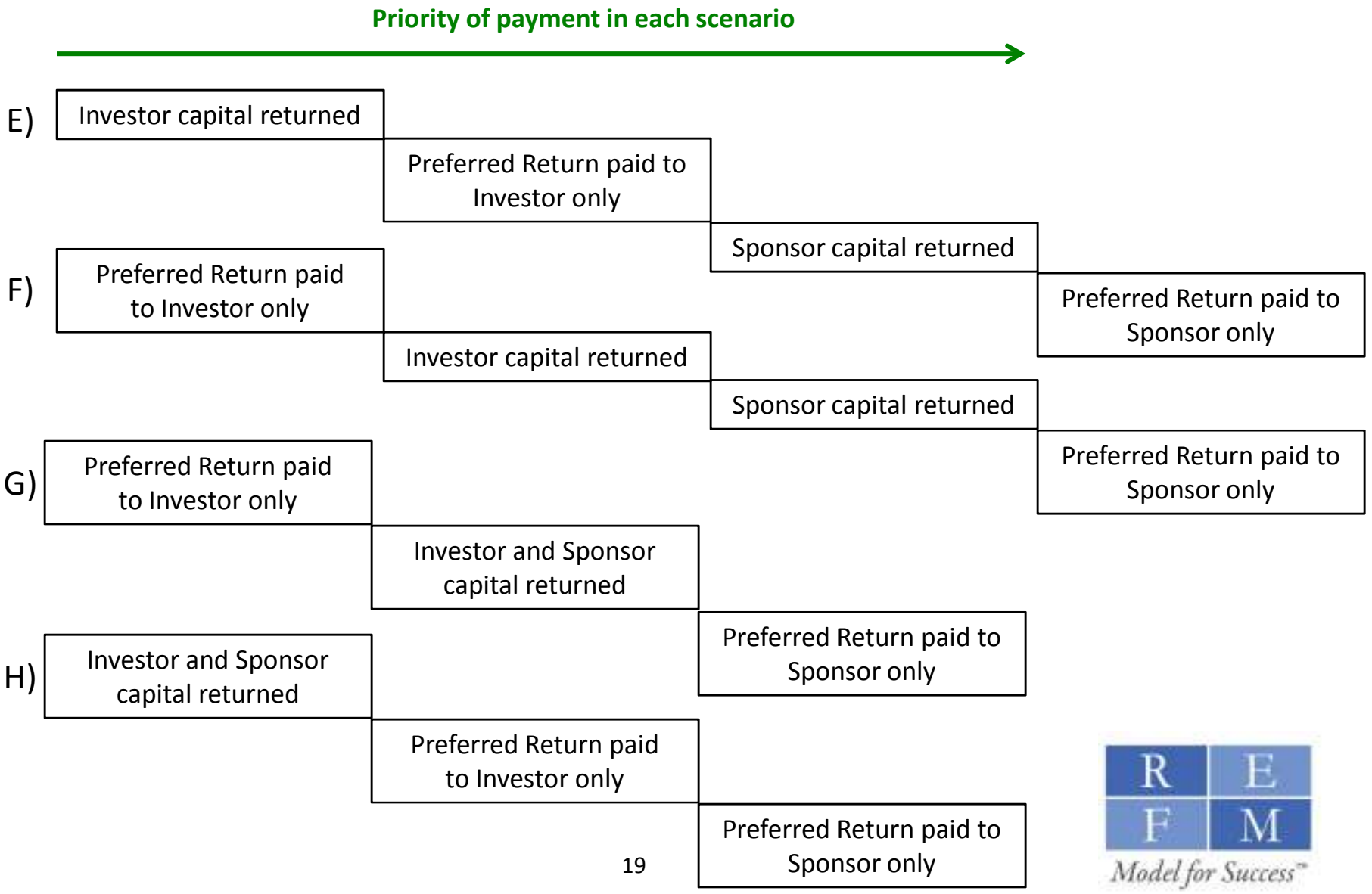

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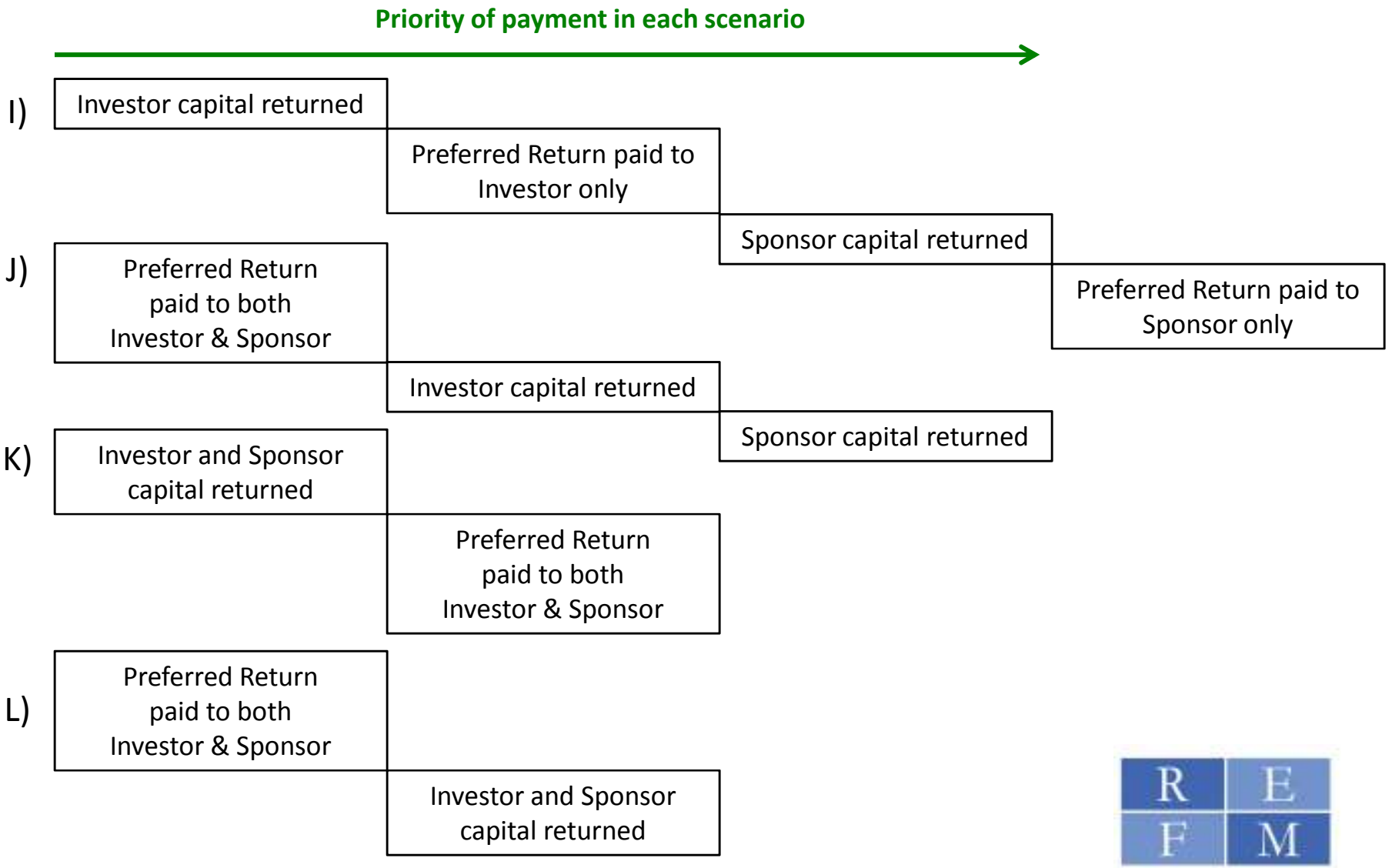

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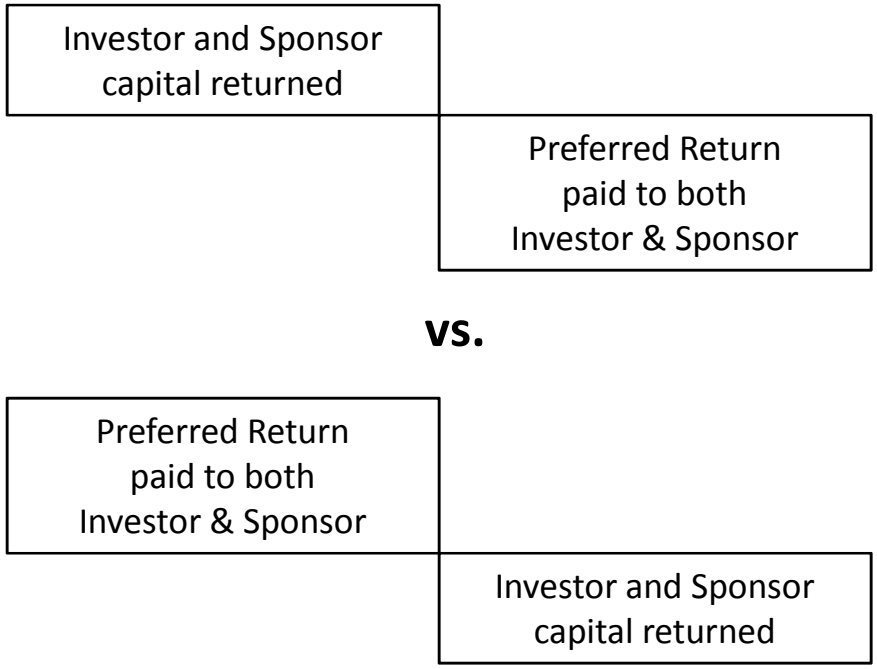
Which Priority of Payment Is Best?

- If capital is returned over multiple periods (as opposed to in a single period), the Preferred Return will be lower in the top scenario due to a declining base off of which the Pref is calculated.



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Preferred Return Payments In Context: REFM Cash Flow Chart

REFM Cash Flow Chart

Capital is invested into the transaction

Asset generates expenses, debt service obligations and income

When there is Positive Levered Net Cash Flow…

Payment "Type A"
Preferred Return Is Paid to all parties receiving the Pref

Payment "Type B"
Then Capital Is Returned to all parties

Payment "Type C"
Then Residual Cash Flows Are Paid Out to all parties

Total of Payments Made = Total Positive Levered Net Cash Flow

* NOTE: There are many exceptions to the priority of payments shown above. This is but one "typical" structure.

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Preferred Returns

- Non-Compounded / Compounded
- Non-Cumulative / Cumulative
- Go To Excel

Capital is invested into the transaction
Asset generates expenses, debt service obligations and income
When there is Positive Levered Net Cash Flow…
Payment "Type A" Preferred Return Is Paid to all parties receiving the Pref
Payment "Type B" Then Capital Is Returned to all parties
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Residual Cash Flow Splitting

Capital is invested into the transaction

Asset generates expenses, debt service obligations and income

When there is Positive Levered Net Cash Flow…

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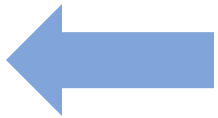

Total of Payments Made = Total Positive Levered Net Cash Flow

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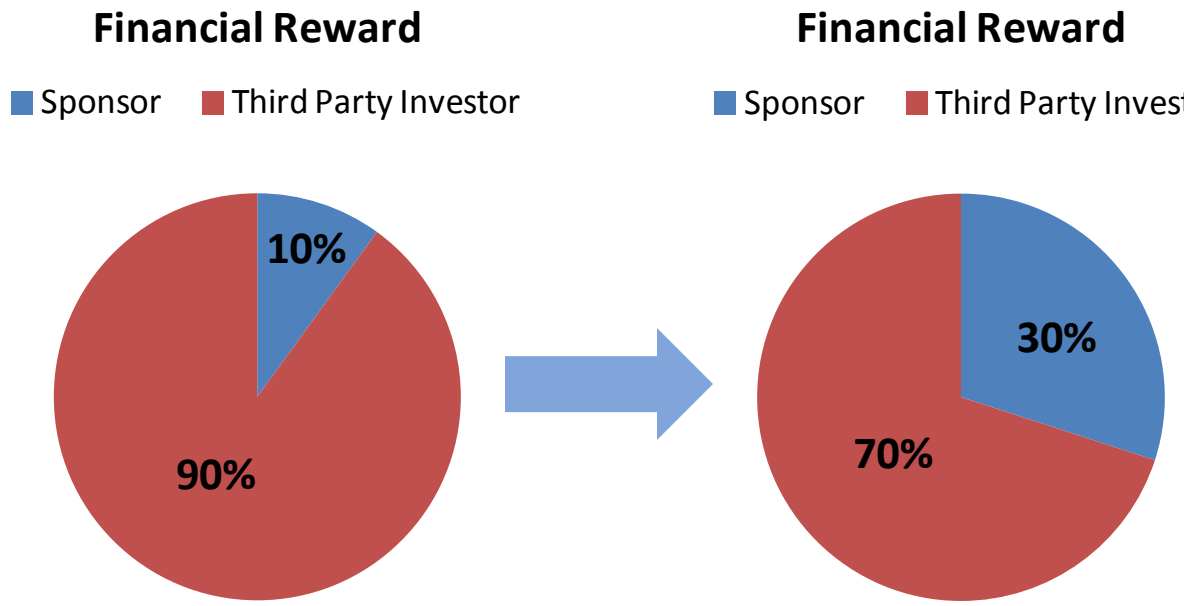
Residual Cash Flow Splitting Purpose

- To drive the disproportionate sharing of overall profits



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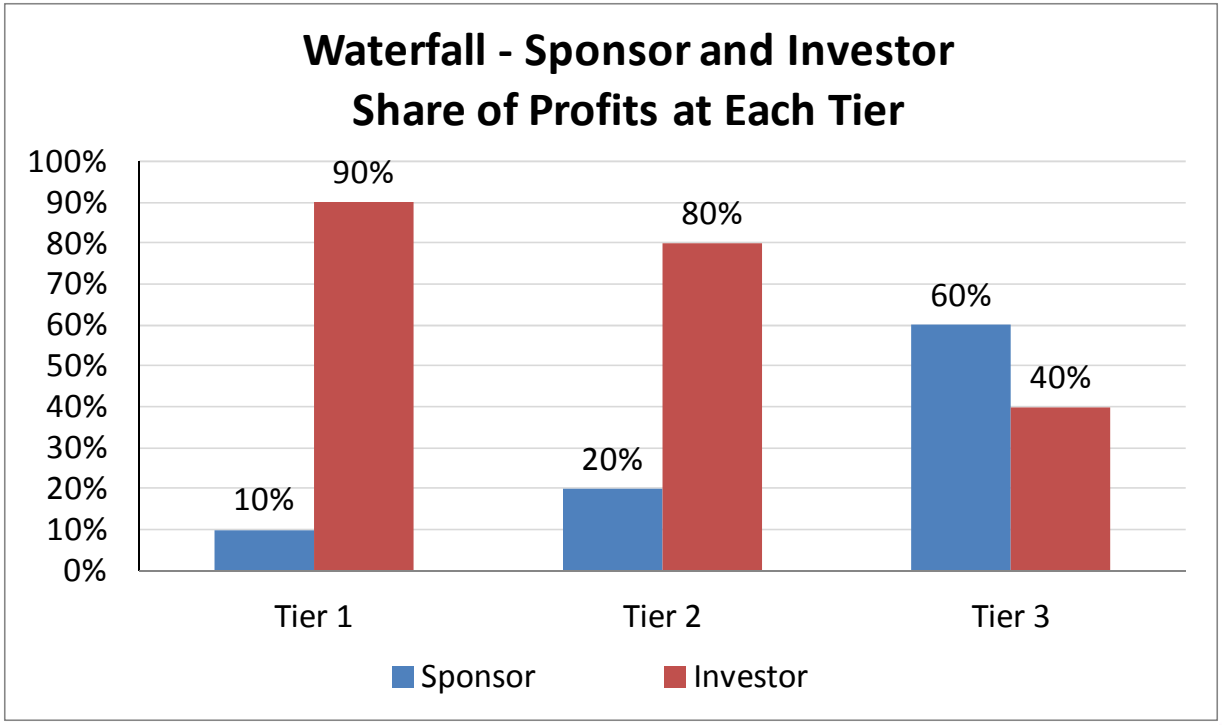
Residual Cash Flow Splitting Methods

- **Simple:** A single split mechanism, e.g., 50%/50% for all cash flows after the Preferred Return and Return of Capital

- **Complex:** A multiple-tier split mechanism, also known as a waterfall

Waterfalls In Context

- Instead of just a single cash flow split, there are negotiated splits at multiple levels, or “Tiers”



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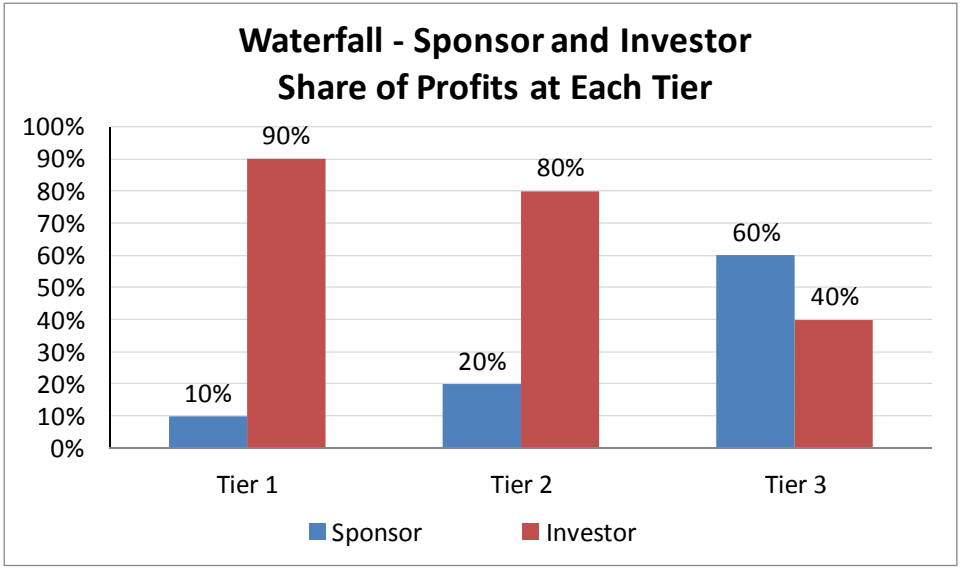
Waterfall Tiers

- Each Tier represents a range of investment performance as measured typically by the IRR, or the Equity Multiple



	Internal Rate of Return Ranges/Hurdle			
Tier 1	From	0%	through	**10%**
Tier 2	Above	10%	through	**15%**
Tier 3			Above	**15%**

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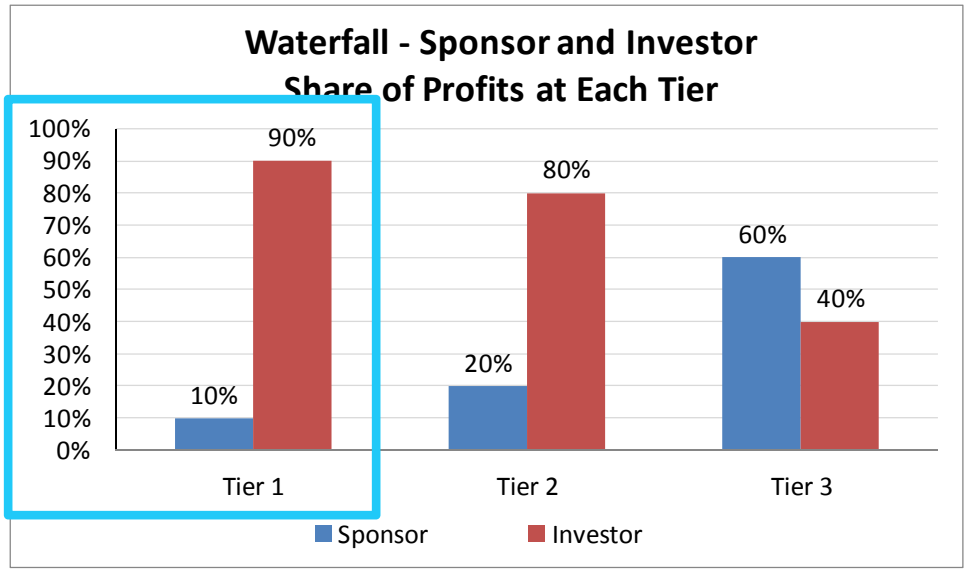

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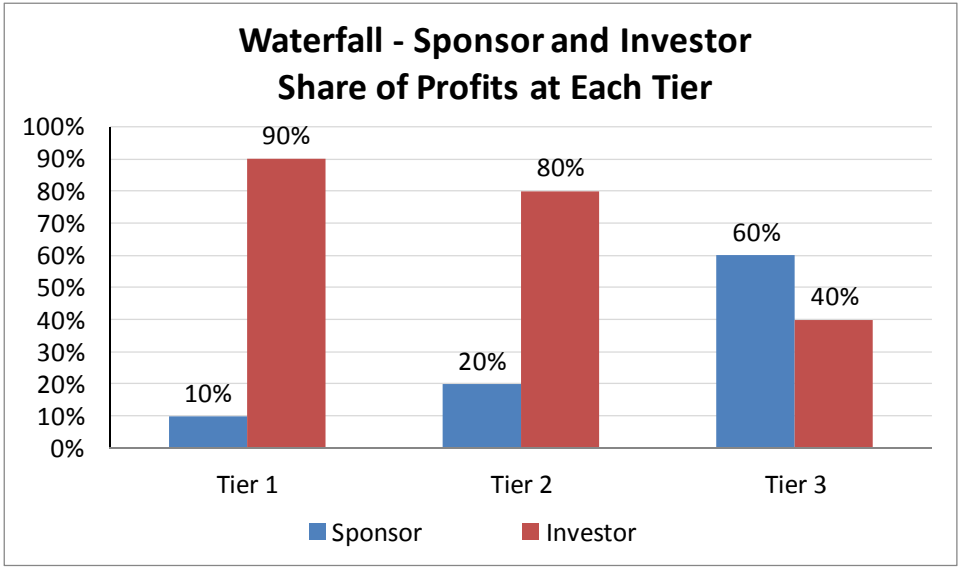

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Investor IRR

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Waterfall Tiers

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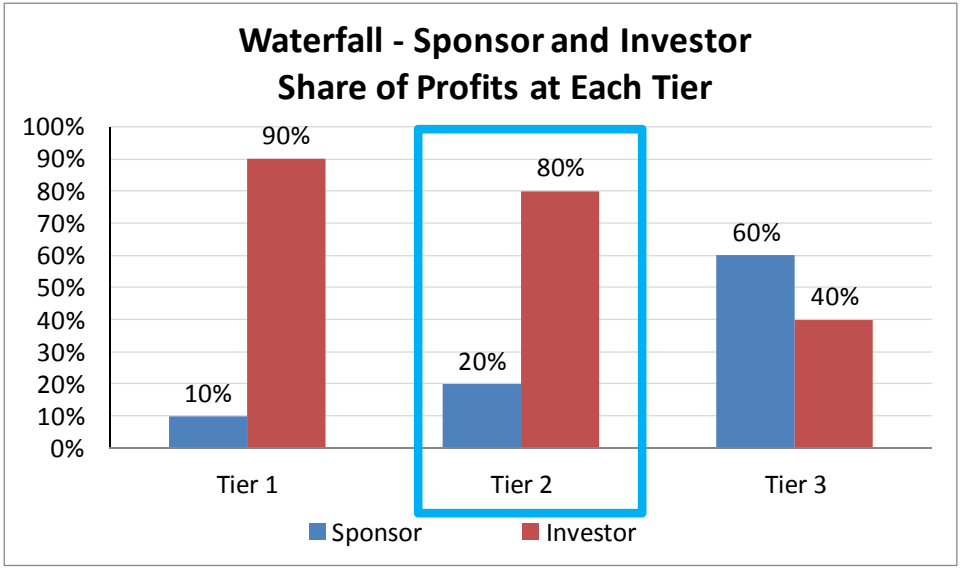

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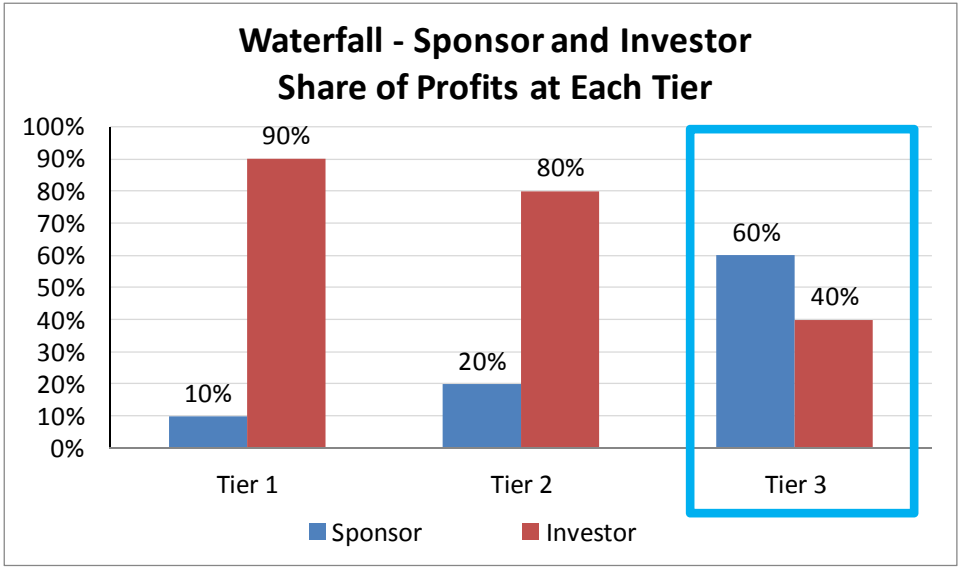

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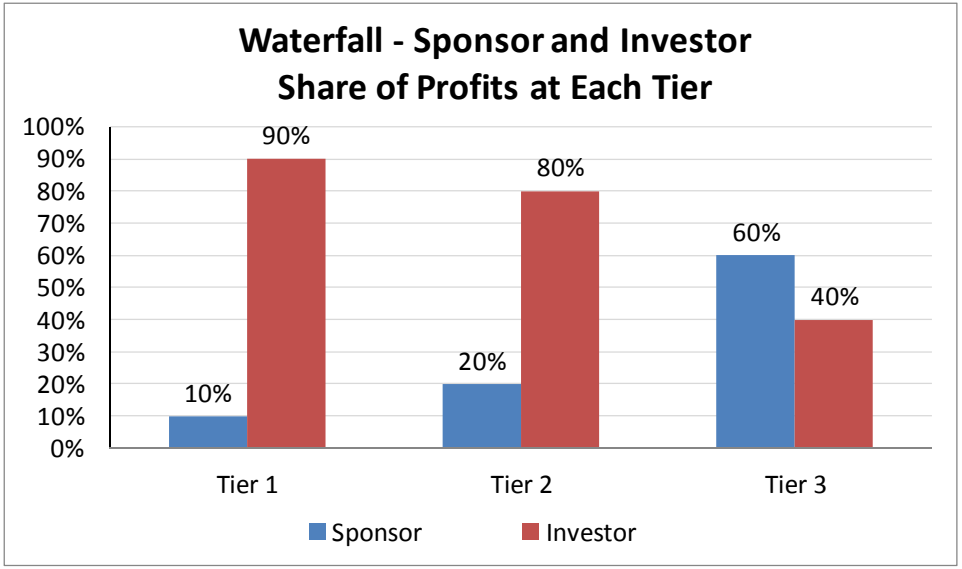
Waterfall Tiers and Promotes

- The Sponsor receives a “Promoted Interest”, or “Promote” (a fancy way of saying “additional share of profits”), of successively larger amounts at each higher-numbered Tier



		Internal Rate of Return Ranges/Hurdle			Sponsor Equity Pro-Rata Share	Sponsor Promote	Total Sponsor Profit Share	Investor Profit Share
Tier 1	From	0%	through	**10%**	10%	**0%**	10%	90%
Tier 2	Above	10%	through	**15%**	10%	**10%**	20%	80%
Tier 3			Above	**15%**	10%	**50%**	60%	40%

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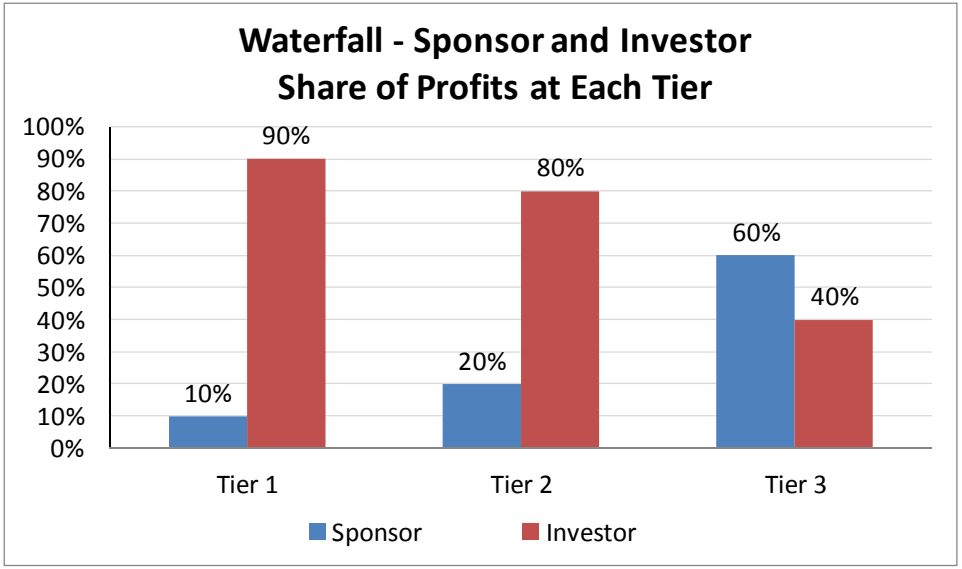

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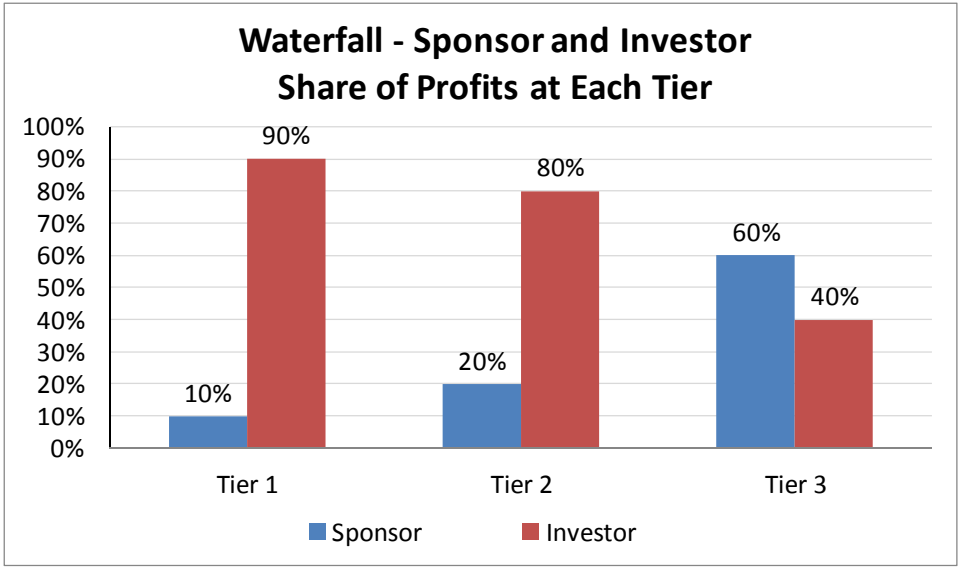

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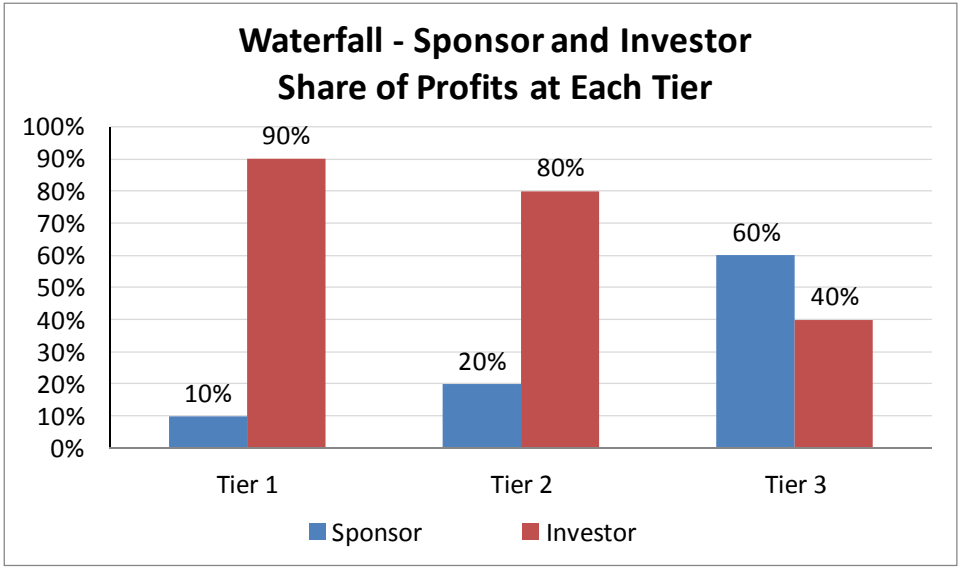
Waterfall Tiers and Promotes - Exception

- In some instances, Tier 1 is the Preferred Return, which includes the return of capital, and if the Prefs are Pari Passu (which is customary), there will not be a Promote at Tier 1, as shown below.



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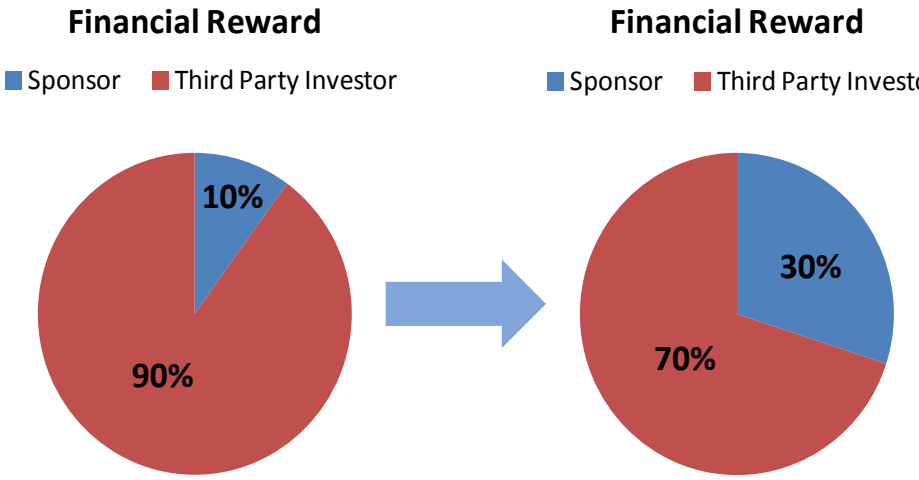
Quick Review

1



2

Through:
- Fees
- Disproportionate cash flow splits using:
  - Promotes and Tiers

3

Now the question becomes…

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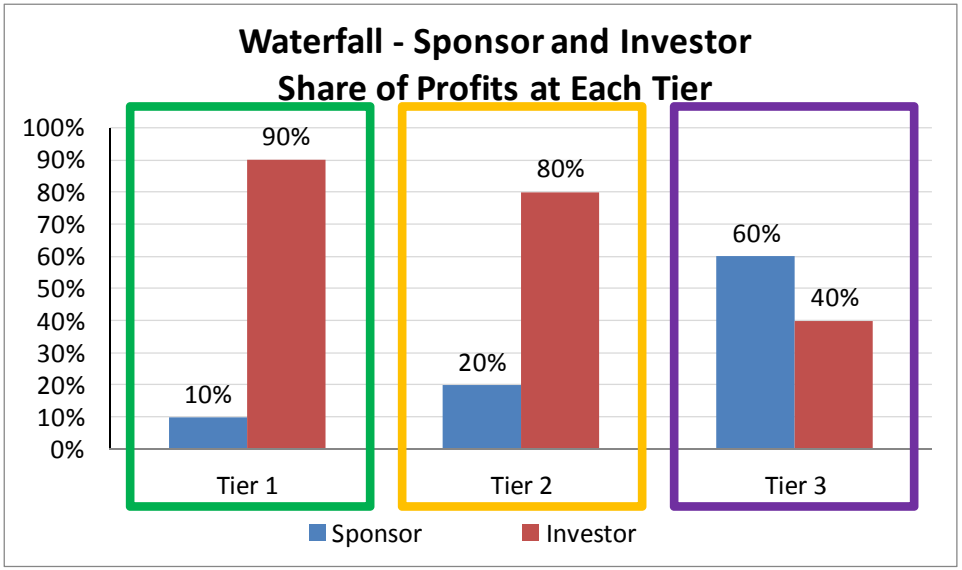
How Does One Isolate Cash Flows Within A Tier?

- By isolating dollars that are responsible for the achievement of each level of investment performance (as measured by an IRR hurdle or an Equity Multiple hurdle), we can measure the dollars and then split them properly.



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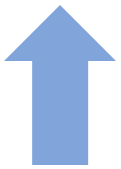
Isolating Base and Incremental Dollar Amounts With IRR

- To do this, we need to make sure we truly understand IRR
- What is the IRR if we invest $100 and don't get it back (i.e., lose all of the invested capital)?

Loss Of All Capital

	Time 0	Year 1	Year 2
	($100)	$0	$0

IRR	#NUM!



Excel cannot calculate an IRR value because it is not 0%, but rather infinitely negative.

Isolating Base and Incremental Dollar Amounts With IRR

- What is the IRR if we invest $100 and only get $100 back?

Return of Capital Only

	Time 0	Year 1	Year 2
	($100)	$0	$100
IRR	0.00%		

By definition, the return of capital only will result in a 0% IRR, because there is no return on capital.

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Isolating Base and Incremental Dollar Amounts With IRR

- What is the IRR if we invest $100 and get $140 back?

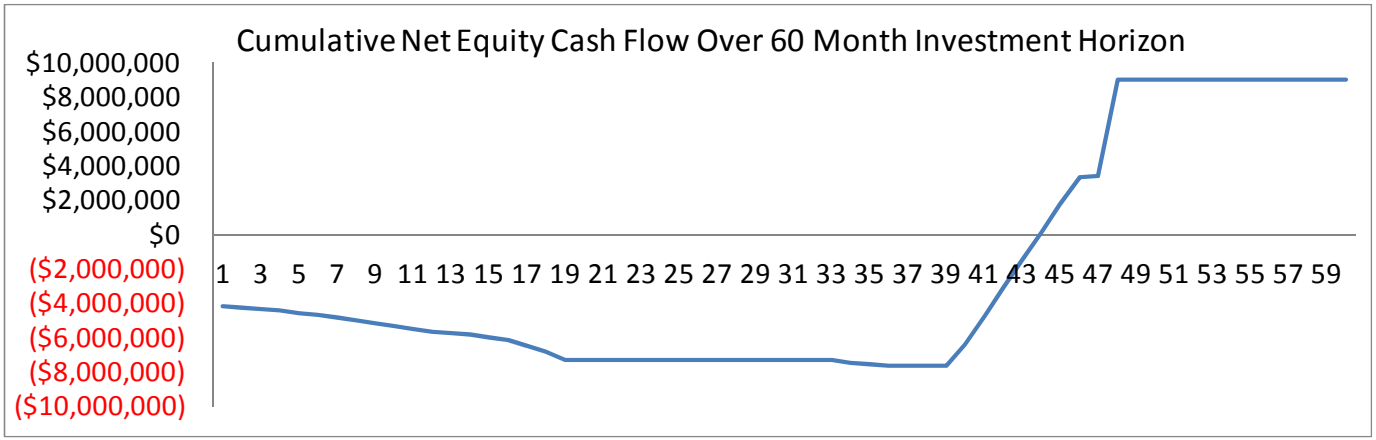
Return of Capital, and Return <u>on</u> Capital of $40

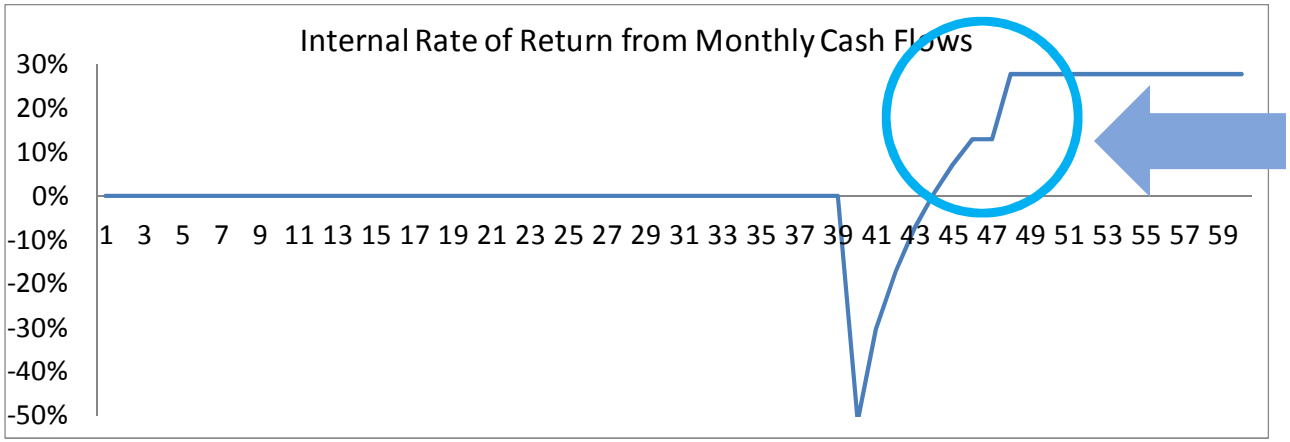
	Time 0	Year 1	Year 2
	($100)	$0	$140
Cumulative IRR		#NUM!	**18.32%**

We must understand that the IRR is a **cumulative** measurement, meaning the transaction's achievement of an 18.32% IRR signifies that the transaction also achieved <u>all Internal Rates of Return less than</u> 18.32%.

Example of IRRs Achieved By A Transaction

- 60-month condominium transaction with IRR of 25%





The transaction's IRR progresses through all IRRs starting with 0%, and plateaus at 25%.

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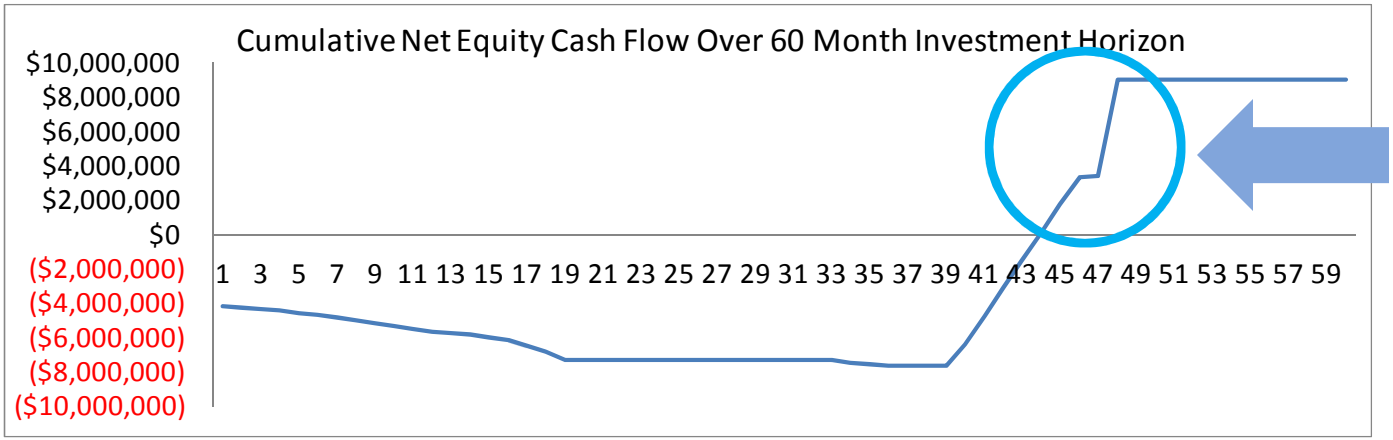
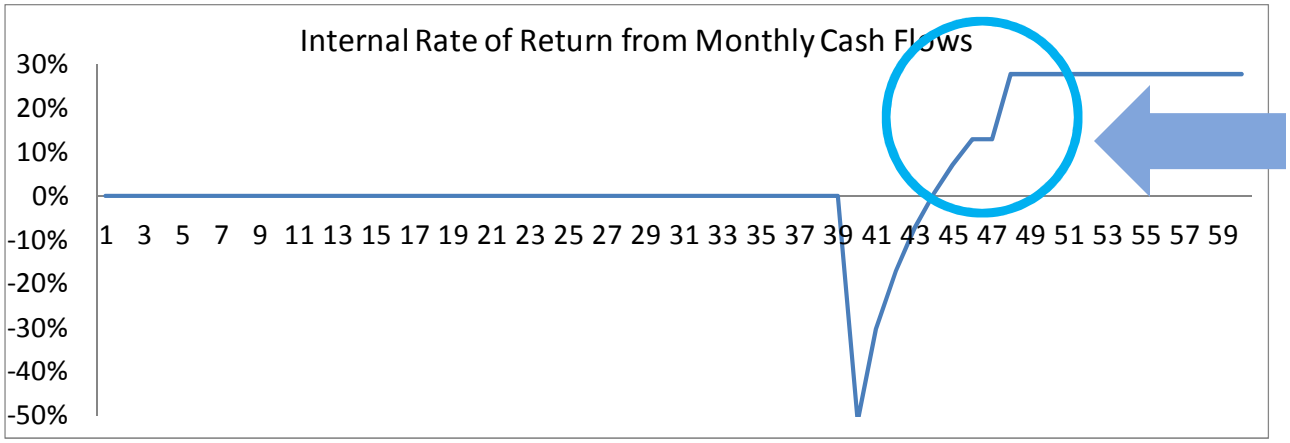
Example of IRR Achieved By A Transaction

- 60-month condominium transaction with IRR of 25%



Every incremental dollar of cash flow causes the IRR to rise further.



The transaction's IRR progresses through all IRRs starting with 0%, and plateaus at 25%.

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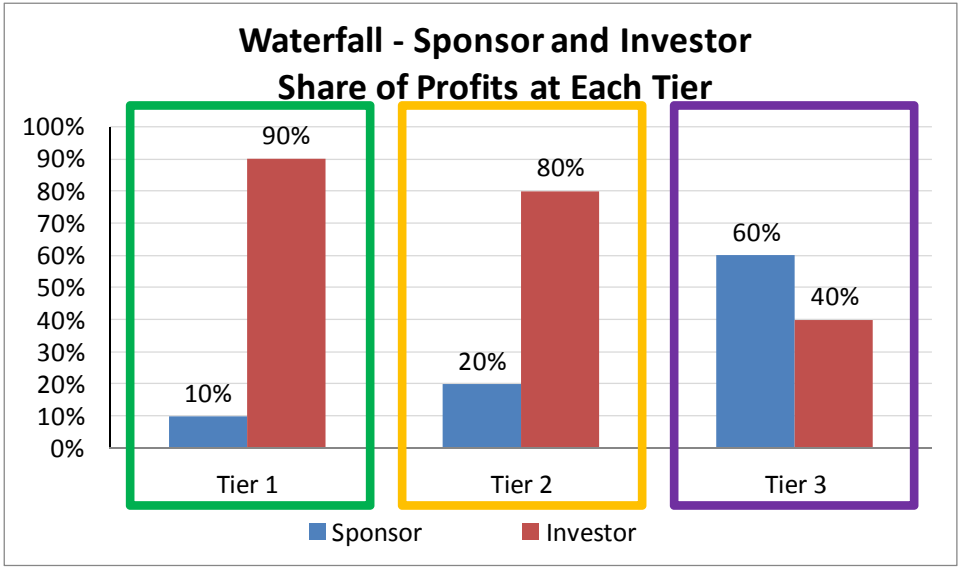
Isolating Base and Incremental Dollar Amounts With IRR

Time 0	Year 1	Year 2
($100)	$0	$140
Cumulative IRR	#NUM!	**18.32%**

As a whole, the $140 drives the IRR to be 18.32%...

Internal Rate of Return Ranges/Hurdle				
Tier 1	From	0%	through	**10%**
Tier 2	Above	10%	through	**15%**
Tier 3			Above	**15%**



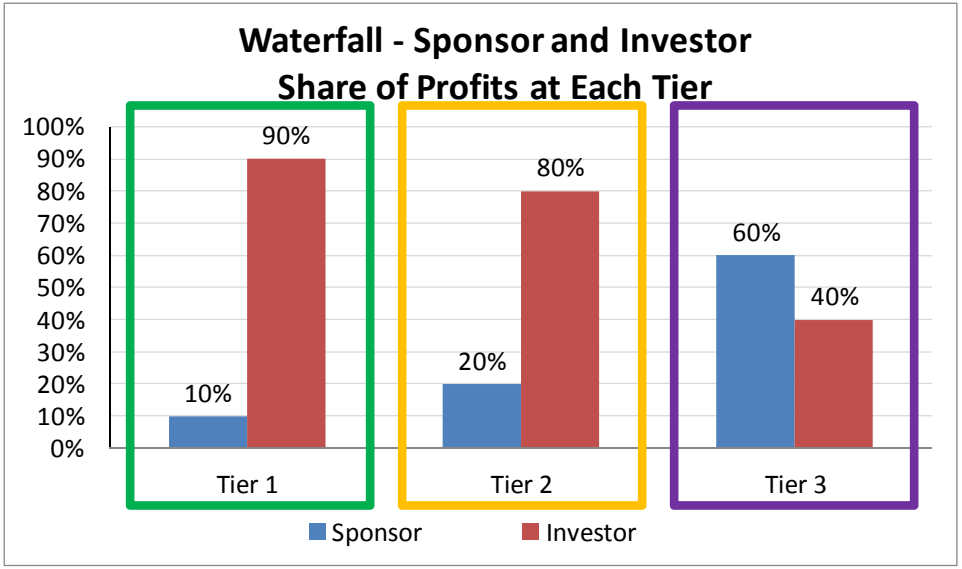
R E F M Model for Success™

Isolating Base and Incremental Dollar Amounts With IRR

Time 0	Year 1	Year 2
($100)	$0	$140
Cumulative IRR	#NUM!	**18.32%**

…but discrete portions of the $140 are attributed to each of Tiers **1**, **2** and **3**.

Internal Rate of Return Ranges/Hurdle				
Tier 1	From	0%	through	**10%**
Tier 2	Above	10%	through	**15%**
Tier 3			Above	**15%**



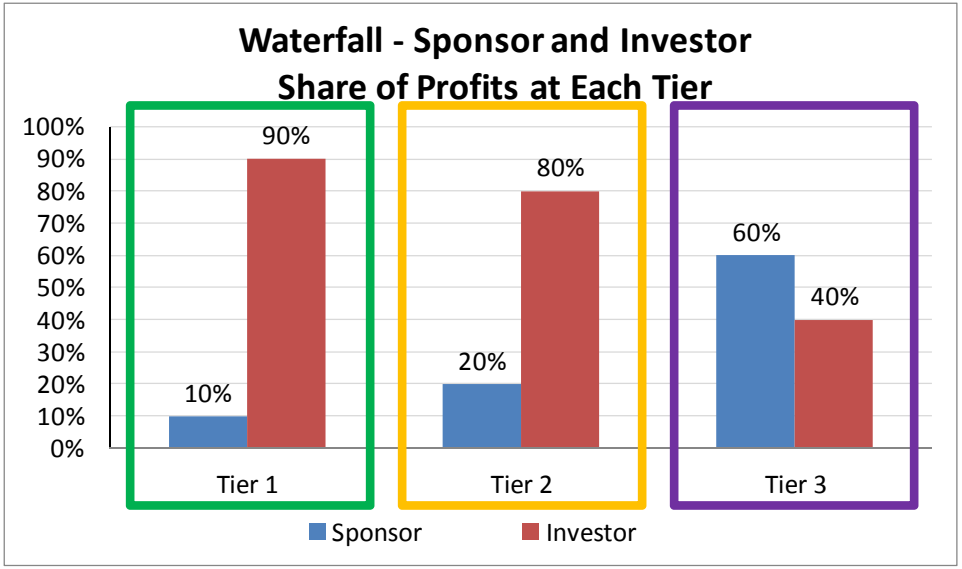
R E F M Model for Success™

Isolating Base and Incremental Dollar Amounts With IRR

Time 0	Year 1	Year 2
($100)	$0	$140
Cumulative IRR	#NUM!	**18.32%**

The task is to tease out the discrete portions of the total $140 that "belong" to the range of IRR performance unique to each of Tiers 1, 2 and 3...

Internal Rate of Return Ranges/Hurdle				
Tier 1	From	0%	through	**10%**
Tier 2	Above	10%	through	**15%**
Tier 3			Above	**15%**

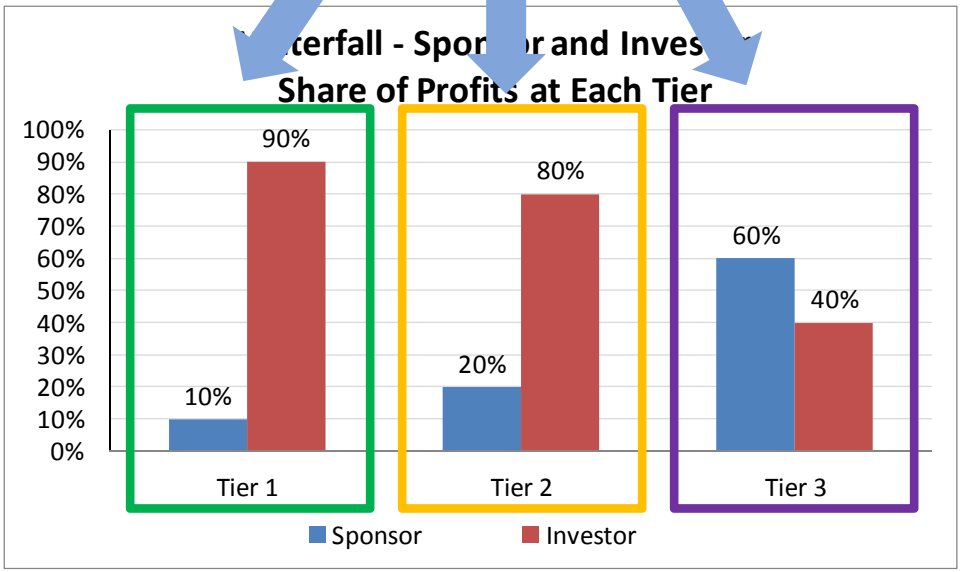


Isolating Base and Incremental Dollar Amounts With IRR

Time 0	Year 1	Year 2
($100)	$0	$140
Cumulative IRR	#NUM!	**18.32%**

…so we can split the dollars associated with each Tier in the proportions dictated in the waterfall description in the partnership documents.

Internal Rate of Return Ranges/Hurdle				
Tier 1	From	0%	through	**10%**
Tier 2	Above	10%	through	**15%**
Tier 3			Above	**15%**



R E F M Model for Success™

Look-Back Mechanism

- The Look-Back Mechanism allows us to tease out the base dollar amount to the first hurdle, and the incremental dollar amounts from each hurdle to the subsequent hurdle.

Look-Back Mechanics Detailed

- If we calculate what cash flow dollar amounts would result in the IRR % specific to each Tier's hurdle rate, then we can tease out <u>just the incremental cash flows</u> that are attributed to each Tier by deducting the known dollar amounts from one another.

Tier 1 Target IRR **10%**

	Time 0	Year 1	Year 2
Investment	($100)		
Target Cash Flow Required		$10.00	$11.00

These are the **base dollar amounts** in each year unique to Tier 1 that would take the IRR from <u>0% through 10%</u>, and maintain a 10% IRR.

Tier 2 Target IRR **15%**

	Time 0	Year 1	Year 2
Investment	($100)		
Target Cash Flow Required		$15.00	$17.25

These are the dollar amounts in each year that would take the IRR from <u>0% through 15</u>%, and maintain a 15% IRR.
Note: Contained **within** these dollar amounts are the base dollar amounts above.

Look-Back Mechanism Isolating Dollar Amounts

Tier 1 Target IRR **10%**

	Time 0	Year 1	Year 2
Investment	($100)		
Tier 1 Target Cash Flow Required		$10.00	$11.00

The Tier 1 (0% through 10% IRR) base dollar amounts.

Tier 2 Target IRR **15%**

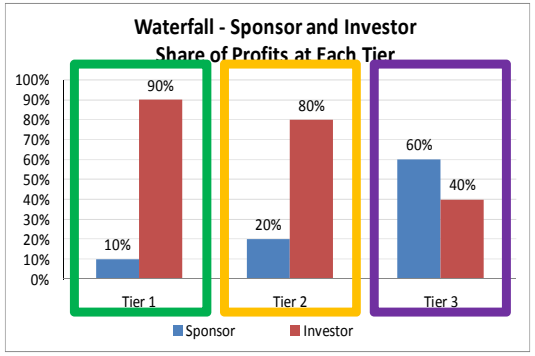
	Time 0	Year 1	Year 2
Investment	($100)		
Tier 2 Target Cash Flow Required		$15.00	$17.25

By identifying the overall cash flows necessary to achieve Tier 2's **15% IRR**…

Assuming Tier 2 is reached:

Cash Flows Unique to Tier 2 only	$5.00	$6.25

… we can identify the **incremental** dollar amounts in each year that take the IRR from **above 10% (the Tier 1 hurdle) through 15%...**



… and we can thus split these dollar values properly at the **80% / 20% ratio for Tier 2**.

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Look-Back Mechanism – Using Equity Multiples

Tier 1 Target Multiple **1.15x**

	Time 0	Year 1	Year 2
Investment	($100)		
Tier 1 Target Cash Flow Required		$15.00	$17.25

The Tier 1 (1.0x through 1.15x) base dollar amounts.

Tier 2 Target Multiple **1.25x**

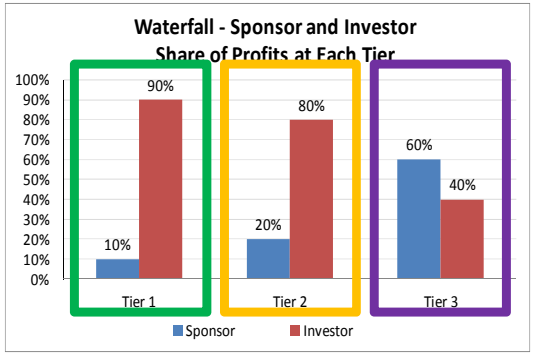
	Time 0	Year 1	Year 2
Investment	($100)		
Tier 2 Target Cash Flow Required		$25.00	$31.25

By identifying the overall cash flows necessary to achieve Tier 2's **1.25x** multiple…

Assuming Tier 2 is reached:

Cash Flows Unique to Tier 2 only	$10.00	$14.00

… we can identify the **incremental** dollar amounts in each year that take the IRR from **above 1.15x (the Tier 1 hurdle) through 1.25x…**



… and we can thus split these dollar values properly at the **80% / 20% ratio for Tier 2**.

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What If There Are 3 Equity Players?

- Nomenclature for 2 equity players only

Principal = Sponsor

Owner of the asset
Developer of the asset
The party that raises a fund

Investor/Third Party Investor

Invests in the transaction
Invests in the fund

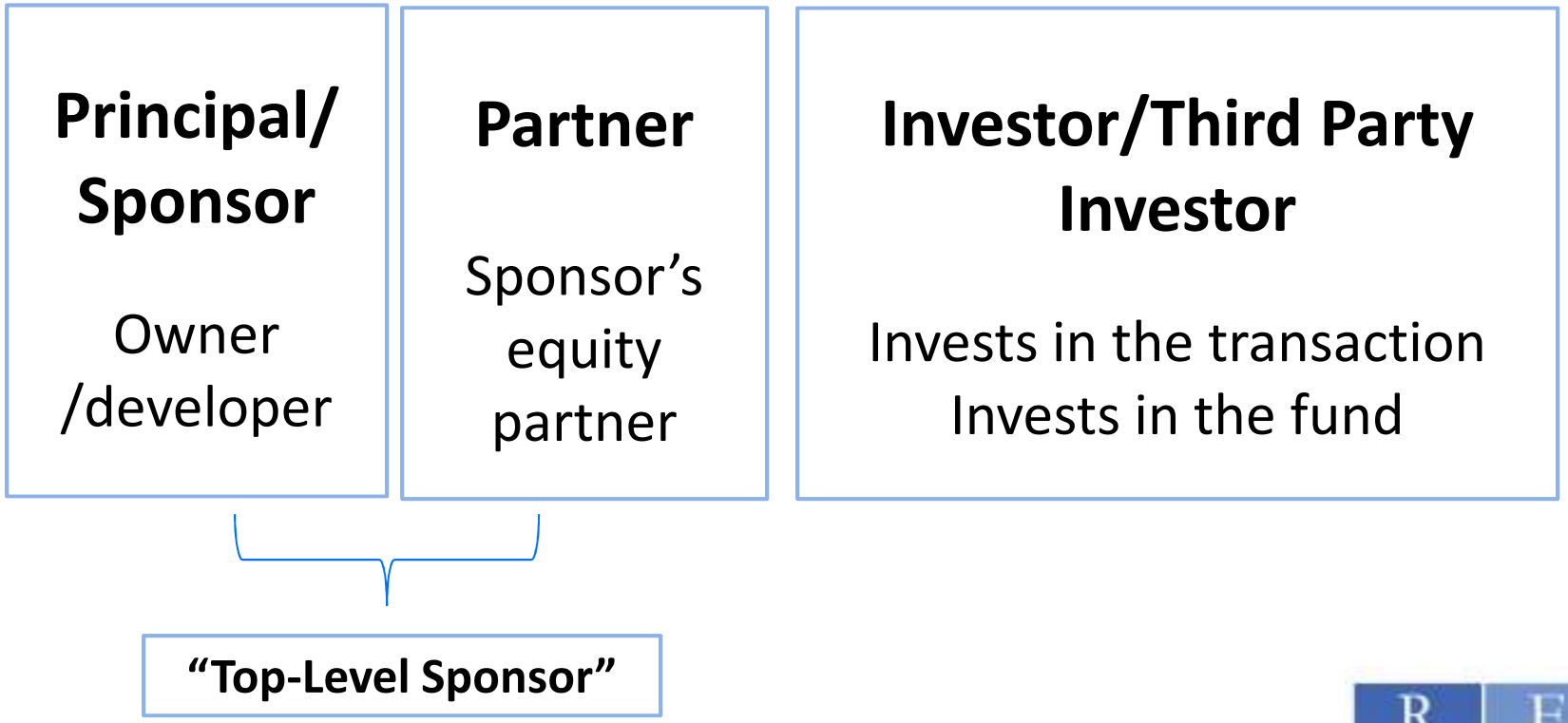
What If There Are 3 Equity Players?

- Nomenclature for 3 equity players

Principal/ Sponsor	**Partner**	**Investor/Third Party Investor**
Owner /developer	Sponsor's equity partner	Invests in the transaction Invests in the fund

What If There Are 3 Equity Players?

- Nomenclature for 3 equity players



Top-Level Sponsor Example

- Local developer (principal/sponsor) and an entity of a Global insurance company (partner) team to pursue transactions in a particular geographic submarket

Principal/ Sponsor	**Partner**
Owner /developer	Sponsor's equity partner

Teaming Up With Third Party Capital

Principal/ Sponsor

Owner /developer

Partner

Sponsor's equity partner

Investor/Third Party Investor

Invests in the transaction
Invests in the fund

"Top-Level Sponsor" JV Entity

First JV Partnership Formed

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Teaming Up With Third Party Capital

Top-Level Sponsor JV Entity

Comprised of both Sponsor and Partner

First JV Partnership Formed

Investor/Third Party Investor

Invests in the transaction
Invests in the fund

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Model for Success™

Teaming Up With Third Party Capital

Top-Level Sponsor JV Entity

Comprised of both Sponsor and Partner

Investor/Third Party Investor

Invests in the transaction
Invests in the fund

Second JV Partnership Formed

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How Equity Might Be Broken Out - $20MM

First JV Partnership Formed: 90/10

	% Total Equity	Amount
Sponsor Equity	**1.00%**	$200,000
Partner Equity	**9.00%**	$1,800,000
Third Party Investor Equity	**90.00%**	$18,000,000
	100.00%	**$20,000,000**

"Top-Level Sponsor"

Second JV Partnership Formed: 90/10

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Double-Promote Structure for 3 Equity Players