# THE BASICS

1. Important terms/calculations
   a. Limited Partner vs General Partner
   b. Earnings Yield ; PE Ratio
   c. Valuation
   d. Compounded rate of return
   e. IRR
   f. MOIC and how it differs from IRR
   g. Preferred equity, common equity and how they differ
   h. Preferred return
   i. EBITDA, Free cash flow and how they differ
   j. Leverage
   k. Carry/Carried Interest
   l. Recurring revenue & why it's important

2. You find a company that you are interested in buying. Over the last five years it has grown sales from $1M to $3M. What is the compounded annual growth rate in sales?

3. This company currently has $1M in earnings. The owner believes that competitors are trading at 5x earnings. If you chose to buy this company, how much would you pay for the business?

4. What is an earnings yield? How is it related to the rate of return on an investment? What is the earnings yield for a company that is bought at the following multiples
   4x   = x%
   5x   = x%
   6x   = x%
   10x  = x%

5. You decide to buy the business and now need to consider how you will structure the deal. You are considering three options
   Debt (10%); Equity (90%) → How many dollars borrowed? How many dollars of equity?
   Debt (25%); Equity (75%) → How many dollars borrowed? How many dollars of equity?
   Debt (50%); Equity (50%) → How many dollars borrowed? How many dollars of equity?

6. Suppose you were going to personally write the equity check. To keep the math simple, suppose the company will earn $1M per year into perpetuity. Suppose you paid 5x earnings. How long would it take you to make all your money back if you used this much debt
   Debt = 0%; Equity=100% → $xM Equity Investment / $1M per year = x years
   Debt =10%; Equity=90% → $xM Equity Investment / $1M per year = x years
   Debt =25%; Equity=75% → $xM Equity Investment / $1M per year = x years
   Debt =50%; Equity=50% → $xM Equity Investment / $1M per year = x years
   Debt =75%; Equity=25% → $xM Equity Investment / $1M per year = x years

7. Suppose the day after you buy the business, you land a big contract. Now your business has twice as much profit. What would the business now be worth under the following multiple assumptions

    5x =

    6x =

    7x=

    8x=

    9x=

    10x=

8. If you sell the business for $10M, what would the return on your investment be if you financed the initial acquisition with:

    | | Equity investment | MOIC |
    |---|---|---|
    | Debt 50% | $xM Equity Investment | $xM/xM = x |
    | Debt 40% | $xM Equity Investment | $xM/xM = x |
    | Debt 30% | $xM Equity Investment | $xM/xM = x |
    | Debt 20% | $xM Equity Investment | $xM/xM = x |
    | Debt 10% | $xM Equity Investment | $xM/xM = x |
    | Debt 0% | $xM Equity Investment | $xM/xM = x |

9. Borrowing money isn't free. It always carries an interest rate, which lowers a company's cash flow. If an investor opts to take on debt (at 10% interest rate) to buy the business, how much interest expense will it incur, and if initial before tax profits were $1M per year, what would profits fall too?

    Debt (10%) → added interest expense = xxxxxx?   New Profit = $1M- xxxxxx  = xxxxxx?

    Debt (25%) → added interest expense = xxxxxx?   New Profit = $1M- xxxxxx  = xxxxxx?

    Debt (50%) → added interest expense = xxxxxx?   New Profit = $1M- xxxxxx  = xxxxxx?

10. Suppose the company you buy has $1M in earnings, and the company grows it's earnings by 5% per year every year for the next five years, what will the level of earnings be

1 year from now = xxxxxxxxxxxxxxx
2 years from now = xxxxxxxxxxxxxxx
3 years from now = xxxxxxxxxxxxxxx
4 years from now = xxxxxxxxxxxxxxx
5 years from now = xxxxxxxxxxxxxxx

11. In a search fund structure, a searcher will have a budget they use to source and diligence deals. If they find a business to purchase, those expenses get added to the cost of the transaction. Suppose the search budget was $400k.   And suppose the budget gets "Stepped up by 50%" to compensate investors for the risk of a search fund.  How much would that increase the cost of the transaction by?  What would happen to the cost of the transaction if the search budget was increased to $600k?

At 400k =
At 600k =

12. Given the higher cost of transacting ($600K + 50% step up), what would the value of the preferred equity be after:

Value of the Preferred Equity

After year 1 =        xxxxxxxxxxxxxxx
After year 3 =        xxxxxxxxxxxxxxx
After year 5 =        xxxxxxxxxxxxxxx

Assume:  Deal = $5M; Debt/equity 50%; PIK=8%

13. Searchers get equity in 3 tranches.  The final tranche is a function of performance.  The EIR starts to collect the final 8 1/3 of equity if their deal yields more than a 20% IRR.

Purchase Price = $5M
Exit Price = $15M

| | IRR | EIR Equity % |
|---|---|---|
| Holding Period = 4 years | x% | x% |
| Holding Period = 5 years | x% | x% |
| Holding Period = 6 years | x% | x% |

How much common equity does an EIR have if IRR on the transaction is

20% x%
25% x%
27.5% x%
30% x%
35% x%

# UNDERSTANDING EIR ECONOMICS

**1.I want to make $10M in 5 years, what do I need to believe?**

You buy a business that has $2M in Earnings at 4x multiple.  Assume 50% debt financing; $500k EIR Budget; 50% step up; 8% pref rate;

A. The interest rate on the debt is 5%.   How much did earnings go down because of higher interest expense?

B. An EIR wants to walk away with a $10M payday in five years from now.  He/she can get there by some combination of growing the business and/or selling at a higher multiple.  Put together a table showing the trade-off between growth on one axis, exit multiple on the other axis.  Highlight the scenarios where the searcher walks away with >$10M in red.

C.  Walking away with $10M is really hard to do with a small company.  So, let's change things up a little and assume you buy a bigger business ($5M EBITDA at 6x multiple).  Put together a table showing the trade-off between growth on one axis, exit multiple on the other axis.  Highlight the scenarios where the searcher walks away with >$10M in red.

D.  Exit multiples are out of a searcher's control.  But how much a searcher pays for an asset when they enter a deal is within their control.  So, assume you buy a business with $5M EBITDA.  On one axis you will have the entry multiple (starting at 5x and ending at 8x, with 50bps increments).  On the other axis you will have growth rates, starting with 0% and growing to 14% in 2 point increments.  Assume the business is sold 5 years from now at the exact same multiple that it was bought.  Put together a table showing how much the searcher walks away with under various growth and entry multiple scenarios.

E.  Then for the same example, produce a similar table but now assume the exit multiple is 2 points higher than the purchase.  Discuss the take home differentials when you assume a higher exit multiple

F.  In general, discuss the benefits of faster growth (in your control) versus higher multiples (harder to plan for)

G.  Now what happens if we change the debt profile from 50% of the transaction to 90%.  How would this change the results in A-E?  Rerun the analysis with the now higher leverage ratios and see what happens to EIR take home pay.

**2. What needs to be true for an EIR to get the full 25% equity?**
You buy a business that has $2M in EBITDA at 4x multiple and you plan to exit in 5 years

A. Construct a table with earnings growth on one axis, and exit multiples on the other.   In the middle show the IRRs of each outcomes.

B.  Then create a parallel second table and translate those IRRs into how much equity an EIR would have.


**3. What would EIR take home pay be if there was no pref rate or step up?**

A. Let assume an EIR buys a business with $2M of EBITDA at 4x multiple.  Now consider different growth rates starting at 0% and ending at 20%.  If the growth rate is double digits, assume the exit is a 5x multiple, and if the growth rate is >20%, assume the exit multiple is at 6x.  Otherwise, assume the exit is 4x.    Run the numbers

|  | IRR | EIR Take home pay | Cost of Preferred | Cost of Step up |
|---|---|---|---|---|
| 0% | | | | |
| 5% | | | | |
| 10% | | | | |
| 15% | | | | |
| 20% | | | | |


B.  Now run the numbers for a business that has $5M of EBITDA at 6x multiple. If the growth rate is double digits, assume the exit is a 7x multiple, and if the growth rate is >20%, assume the exit multiple is at 8x.  Otherwise assume an exit multiple of 6x


TO GET THE ANSWERS TO THESE QUESTIONS, PLEASE EMAIL RWEXLER@NEXTGENGP.COM WITH YOUR ANSWERS SHWOWING YOUR WORK.