Building a financial plan – The Numbers

Rana K. Gupta
The numbers

- Calisthenics
- The Idea
- Revenue
- Costs
- Cash Table
- Financing
What’s the difference between these three words?

I’ll offer my simple definitions

**Accounting**

The purpose of accounting is to have a systematic way for us to look at companies’ financials. It’s a standardized, common language with guidelines and generally accepted principles.

**Finance**

Finance addresses the type of funding you require to achieve your objective.

**Cash**

Cash is the most liquid asset that permits you to buy something NOW.

Editorial: in the world of a startup, cash is what matters most.
The Income Statement

- Revenue
- Cost of Goods sold
  - Gross Profit
  - Operating expenses
    - salaries
    - overhead
    - travel
    - services (insurance, lawyers, accountants)
    - product development
  - Operating Profit
    - Interest, Tax, Depreciation, Amortization
  - Net Income#

Gross Margin = Gross Profit/Revenue

Operating Margin = Operating Profit/Revenue

# AKA profit, earnings, the bottom line

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I/S: let’s take a closer look – the head

- Revenue – money coming in!
  - Sales: units, subscriptions, advertising commissions, services
  - Royalties (from a license)

- Cost of Goods Sold
  - AKA “variable costs”
  - Just those costs associated with the sold item
  - Materials, labor are the usual suspects
  - Sales commissions? Royalty payments? There’s a lot of “creativity”

- Gross Profit & Gross Margin
  - Learn to talk about margins, with the accompanying face
I/S: let’s take a closer look – the body

- Operating expenses
  - Fixed costs
  - Where all the work gets done
  - All the costs that’ll occur whether you sell anything or not

- Operating profit and Operating Margin
  - EBIT (earnings before interest and tax)
  - And that other acronym (EBITDA, ew)
I/S: let’s take a closer look – the legs

- Interest: what you owe a lender if you take out a loan
- Tax: ummm
- Depreciation: How we expense a capital cost** over time
  - Check it out: if you buy a $10,000 piece of equipment, where does that show up in an income statement? Depreciation
  - Think for a moment about cash flow here. When did that $10,000 leave your pocket?
- Amortization: another form of depreciation – leave this to accountants to know the difference

** Capital expense v. Operating expense:
Capital expense is a lump sum payment, e.g. equipment, building, machinery
Operating expense: an ongoing expense that shows up in the income statement
The Balance Sheet

Assets

- Cash
- Inventory
- Property, Plant & Equipment (PPE)

Liabilities

- Short term
  - salary
  - accounts payable
- Long term
  - a loan over a year

Equity

- Shares owned by shareholders
- Retained earnings
Why do I say profit is an idea?

Make it

Accruing costs!!

Raw materials
Manufacturing
Salaries

Finished:
Ship the product!
Send the invoice!

Waiting to get paid

30 days?
60 days?
90 days?

Accruing
more costs!!

Q: when can I record the revenue on my I/S?

Q: when does the cash hit my bank account?

Paid
One of the most important equations in business

\[ P \times Q \]

Where:

\( P = \text{price} \)
\( Q = \text{quantity} \)
Check it out: \( P \times Q \)

- A company’s Market Capitalization (aka market cap, value of a company, company’s valuation)
  - \( P \) = share price
  - \( Q \) = number of shares
- A company’s sales
  - \( P \) = price of the product(s)
  - \( Q \) = number of products sold
- Market size (based on sales)
  - \( P \) = price of the product(s)
  - \( Q \) = number of products sold

What part of the story is this not telling?
Components of a financial plan

**START HERE**
- Objective
- Vision, strategic intent
- How to make money
- Value proposition
- Can you build it?

**REVENUE**
- Business model
- Customer(s)
- Addressable market
- Revenue forecast
  ✓ **ASSUMPTIONS**

**COST**
- Vendors
- Expense forecast (COGS, Operating)
- Break even
  ✓ **ASSUMPTIONS**

**FINANCING**
- Milestones
- Amount required
- Use of funds
- Type of funds
- Long term plan or Exit
- Capitalization table
  ✓ **ASSUMPTIONS**

**VERY IMPORTANT OTHER STUFF**
- Competition
- Market forces
- Marketing
- Product development
- Supply chain
- Operations
- Financial statements
- Acquirers
- Contracts
- Intellectual property
- Intellectual property
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Do you have an idea, a REAL idea? Really?

- A CA venture capital firm asks: Can you build it? Can you sell it?
- Mike Gonnerman asserts: “You need to articulate a vision, how you’ll make money and when you’ll breakeven”
- Prof Gupta suggests: “Run a back of the envelope (BOE) analysis because 99% of your (and my) ideas should be discarded”

SERIOUSLY
- Value proposition
- Customer conversations
- Market NEED

I seriously doubt it
Must have that Product-Market fit!!!
The idea - assumptions

- **Life situation**
- **Need**
- **Required solution**
- **Customers**

*Any assumptions that lay the foundation for your idea*
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✓ Cash table
Revenue forecasting – the most difficult of all

- I’ll tell you the trick
- I will
- That’s why you’re here isn’t it? To hear the trick?
- Oh yes, there’s a trick
- Ready?

- CUSTOMERS AND COMPETITORS!

- That’s it. That’s the trick. For real.
Revenue forecast – from three directions

- Top down – macro
  - Addressable market
  - Assumptions about market penetration
  - Percentages

- Bottom up – micro
  - House by house
  - Sale by sale
  - Click by click

- Sideways – competitors, comparables
  - Annual reports
  - Interviews – ALWAYS meet with your competitors!
  - Talk with experts to learn how others did it
What’s an addressable market –

- NOT the size of the auto industry
- NOT the size of the medical industry
- It IS the market into which you can sell **DIRECTLY** your product or service

**Examples**
- Hot dog stand at Museum of Science
- Cardiac Stent
Revenue- assumptions – important numbers

- Price
  - Product or service

- Sales cycle
  - How long from the time you meet a customer until you make a sale
  - What are the steps to making a sale

- Pipeline
  - How to build a pipeline
  - How will it lead to a sale
You have to know your sales process…

- One salesman
- Three calls per hour
- 25 calls per day
- Never happen

Calls: 100
Second Call: 50 out of 100
Webex: 20 of 50
Visit: 10 of 50

Two weeks
Four weeks
Two months
Two months
5.5 months so far
to create a pipeline

Second visit

Proposal review

Negotiation

Sale

Three months

One month**

One month**

Sales cycle: 10.5 months total

** usually more like three to six month!
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Costs tend to appear easier – but not if you want to do it right

- Basic costs are available, such as rent, people
- Cost of Goods Sold (COGS) takes a lot of work
  - THIS is important
  - Shipping time
  - Credit terms
- Your operating plan feeds your operating costs
  - Most entrepreneurs don’t consider an operating plan, to their detriment
  - What type of operations will you have? In house? Outsourced?
- Headcount
  - When, who, you need to hire
- Space requirements and expansion
- Cost of development (product)
  - Talk with vendors, competitors, Advisors, other entrepreneurs
  - Assumptions, assumptions, assumptions
Know your breakeven – it’s the point after which you start **MAKING MONEY**

- Breakeven by dollars, units, what have you
- This is a huge risk-reducer
- Don’t give it another thought. Just DO it

\[
B/E = \frac{\text{Fixed Costs}}{\text{Price} – \text{Variable Costs}}
\]
Calculating B/E

Fixed costs = $500,000
Price per unit = $100
Variable cost per unit = $50

\[
B/E = \frac{FC}{(Price-VC)}
\]

\[
B/E = \frac{500,000}{(100 - 50)}
\]

\[
= \frac{500,000}{50}
\]

\[
= 10,000 \text{ units}
\]

How many units do you have to sell to break even?

At the 10,001st unit cash is coming in the door
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✓ Cash table
The cash table is my construct – but everyone has a version

<table>
<thead>
<tr>
<th>INVESTMENT</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
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<tr>
<td>Equity</td>
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<td>Grant</td>
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<td>TOTAL</td>
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<td>REVENUE</td>
<td>Week 1</td>
<td>Week 2</td>
<td>Week 3</td>
<td>Week 4</td>
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<tr>
<td>Product 1</td>
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<tr>
<td>Product 2</td>
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<tr>
<td>TOTAL</td>
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<tr>
<td>OPERATIONS</td>
<td>Week 1</td>
<td>Week 2</td>
<td>Week 3</td>
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<td>BANK BALANCE</td>
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<td>Week 3</td>
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<tr>
<td>Ending</td>
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* If necessary. Will be required for equity financing

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Milestones drive value, use of funds AND amount required

- Milestones should be
  - Objectively auditable
  - Adding value, by anyone’s measure
  - Reducing risk, by anyone’s measure

- Whatever resources you’ll need to achieve your milestones is your “use of funds”

- Calculate how many $$ to reach each milestone and add up the milestones – that’s how much you need

This is one of the most important slides in the deck

Don’t ask: “How much money should I raise?”

Wrong question
Milestone-driven financial planning – the market will tell you what’s important

- **Investors are buying milestones**
  - YOU should not be the person to state your milestones

- To determine what are the milestones for you:
  - Understand other companies’ milestones (comparables)
  - Advisors and mentors
  - Customers
  - Acquirers
  - Investors
  - Collaborators
Exemplar activity: Product Development

- Engineer (FT): $100,000/year
- Outsourced prototyping house: $100,000
  - $25,000/iteration
  - Assume four iterations
- Software engineer (PT): $50,000/year
- Manufacturing expert (PT): $50,000/year
- Outsourced commercial manufacturing house**: $400,000
  - $100,000/iteration
  - Assume four iterations to commercial product
  - Assume after two iterations, you’ll have a test market device

** replaces the proto house after protos finished
$400,000 buys us a first proto

First Prototype
End Q2

Pilot Products
End Q1

Commercial Products
End Q4

Sales: $150,000/year

Fixed Costs: $500,000/year

Product Development:
$300,000/year $600,000/year

First Proto:
0.5 * $300,000 + 0.5 * $500,000 = $400,000

Pilot Products:
$937,500 + $400,000 = $1,337,500

Test Market*
End Q2

Year 1

Q1 Q2 Q3 Q4

Year 2

Q1 Q2 Q3 Q4

* In the hands of five paying customers

$937,500

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The type of funding is a function of objective and business (cash)

- **Objective**: If you don’t want to sell, don’t take equity

- **Cash**: If your business will not generate cash for a while, don’t consider debt
Capitalization (‘Cap’) Table – tells who owns what

<table>
<thead>
<tr>
<th>Investment</th>
<th>Price</th>
<th>Shares</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thing 1</td>
<td></td>
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<tr>
<td>Thing 2</td>
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Rana’s definition of an investment

- An investment is an opportunity with the risk quantified, reduced: risk and reward quantified
- How to convert an opportunity into an investment?

- You KNOW the first answer!!
- Assumptions, assumptions, assumptions
- Experience
- REAL, hands on, advisors
- Clear about what you don’t know or have
- Plan to acquire what you don’t know or have
- Path from here to there
The important threesome

- Match your funding sources with fundability** and objective##

** See Self Assessment tutorial
## See What’s My Objective tutorial
Exit

- Just comparables

- Doesn’t matter if you’re public or private, it’s what you can negotiate