# *RMA*

# Financial Projections

presented by

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# *Background*

Chain Bridge Bank, N.A. (Aug 2007 to Present)

$1.4 billion +/- commercial bank

NYSE: CBNA

Headquartered in McLean, VA.

Prior Experience:

- Commercial Banking
- Private Capital Fund
- Freddie Mac Multifamily

# *Class Introductions*

Who are you?

What do you do?

How do you do it?

How can I help you do it better?

What do you want to take away from today?

# *Loving Data*

Data points say so much about humans as a species, how we process information, our inability to look dispassionately at a situation, the ever-present cognitive errors, even the challenges of reaching a simple, rational conclusion based on evidence.

# *No. 1 Seeking Information*

- We seek information to reinforce our beliefs.
- We suffer from the endowment effect: Placing a higher value on holdings we already own.
- Hey, if we bought it, then it must be good!
- Combination of wishful thinking and self-validation.
- Most people don't really want to find evidence that what they did are a dog; they hate to admit error.
- Instead, we seek proof that the original decision was correct.

# *No. 2 Selective Perception*

- Selective perception prevents us from becoming fully informed.
- Not only do we overvalue what we already own, but we tend to seek out information that confirms the value.
- Selective perception and confirmation bias see to it that we overlook evidence to the contrary.
- Creates a huge blind spot.

# *No. 3 Different Perspective*

- Ability to see the world from a different angle or perspective is hard.
- For every transaction, there are at least two valid points of view: *The buyer's and the seller's*.
- Every buyer should be able to make a case for why an investment should be sold.
- Every forecaster who predicts a stock-market top should be able to explain why the rally could go on for years.
- Every pundit who assures us that economic growth will be robust should be able to spot the immediate recession risks.

# *No. 4 Emotions*

- Emotions get in the way.
- Causes us to look at things in a biased manner
- Tribal nature of politics works against us; so too do fear and greed when capital is at risk.
- Seeing the world without letting our own feelings color perceptions is a never-ending battle.

# *No. 5 Objectivity*

- Objectively measuring data isn’t our strong suit.
- If keeping our emotions under control is difficult, evaluating data is even more challenging.
- Compelling narratives can easily sway us, even when the facts say otherwise.
- Sports fans and partisans are so deeply invested in a specific outcome that they simply lose the ability to objectively judge reality.

# *Loving Data*

- The lack of evidence does not mean it did not happen.
- As physicist Carl Sagan once observed, “Extraordinary claims require extraordinary evidence.”

# *Loving Data*

- Since you cannot conclusively disprove this, it therefore could be true.
- We believe what we want to believe, regardless of the evidence.
- In the banking, the costs of such an approach can be quite expensive.

# *Biases*

- Biases affect perceptions, predictions, and decision-making.
- Biases may operate exclusive of the others or may overlap.

# *Biases*

- Overconfidence Bias represents those feeling – knowing!
- Their insights are correct and superior to others' views.
- These individuals may shut out other viewpoints or focus mostly on viewpoints that confirm their perspectives.

# *Biases*

Where have we witnessed such biases?

# *Biases*

## Dot-Com Bubble

Investors were convinced that any and all companies involved with the expansion of the internet and cellular communication were long-term winners.

# *Biases*

Housing Bubble

Investors and homebuyers were convinced that home prices do not decline.

History did not show a price decline since the Great Depression.

It is not possible to have a severe economic contraction with all those policy “stabilizers” which means home prices cannot decline, right?

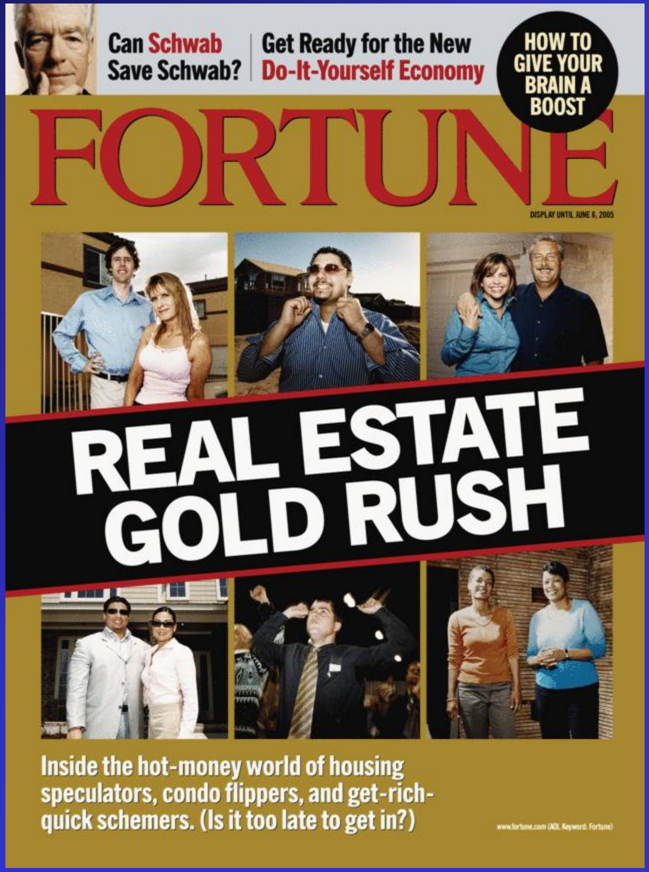
# *Biases*

Cryptocurrency Bubble

Investors are convinced that crypto will replace banking.

# *Biases*


WHY DEEP THROAT CAME OUT ■ IRAN'S TWENTYSOMETHINGS
TIME
HOME $WEET HOME
Why we're going gaga over real estate
■ WILL YOUR HOUSE MAKE YOU RICH? ■ SUPER-HOT MARKETS ■ IS IT TIME TO BUY—OR SELL? ■ THE CASE FOR RENTING


Can Schwab Save Schwab?
Get Ready for the New Do-It-Yourself Economy
HOW TO GIVE YOUR BRAIN A BOOST
FORTUNE
REAL ESTATE GOLD RUSH
Inside the hot-money world of housing speculators, condo flippers, and get-rich-quick schemers. (Is it too late to get in?)

# *Herding Biases*

There is a flipside, where those overconfident may actually become right, adding to their confidence.

Herding Bias represents the comfort from doing what others are doing.

# *Herding Biases*

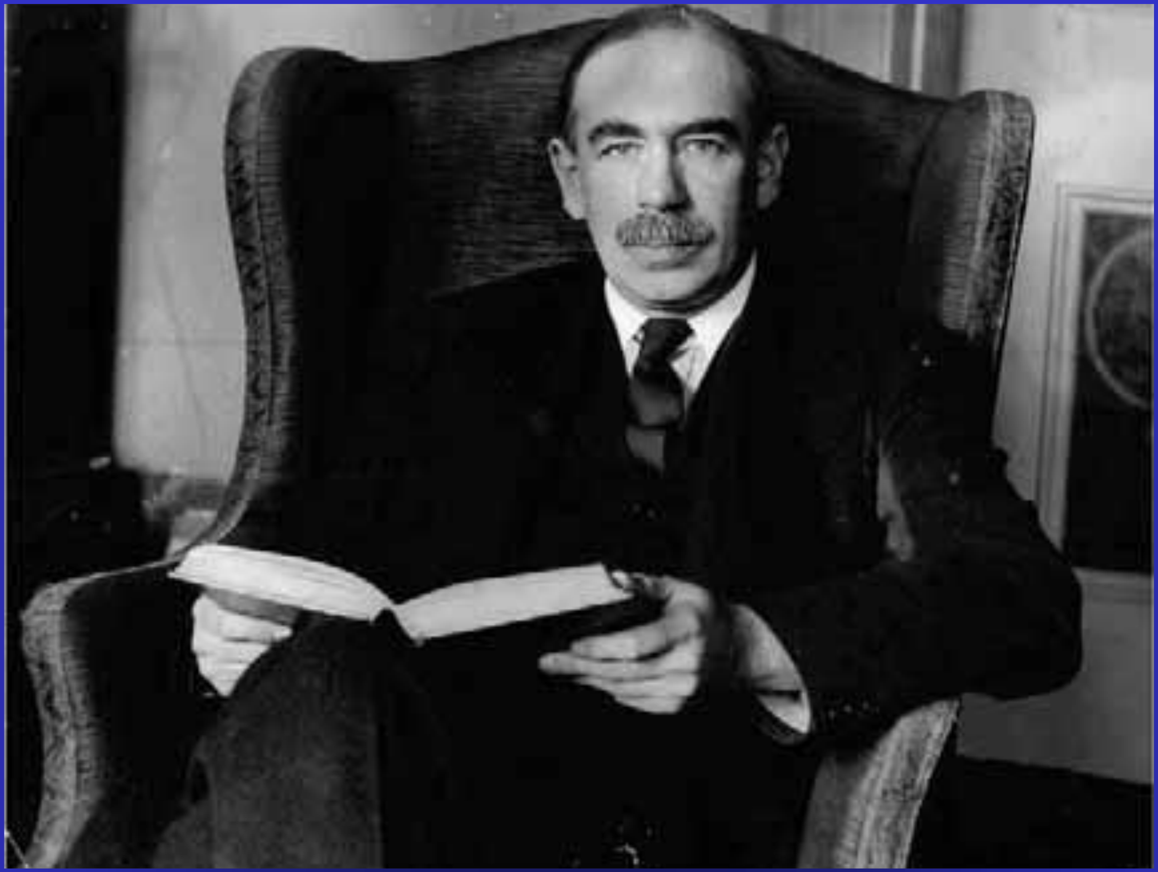
If others are buying technology stocks, then who am I to think differently?

If others expect interest rates to rise, am I really smarter to think that rates will stay the same or fall?

It is easier to be wrong when the majority is wrong, too.

# *Herding*

JUST A NORMAL DAY AT THE NATION'S MOST IMPORTANT FINANCIAL INSTITUTION...
I'VE GOT A STOCK HERE THAT COULD REALLY EXCEL
REALLY EXCEL?
EXCEL?
SELL?
SELL?
SELL
SE
SELL!
SELL!
KAL '89
SELL!
SELL!
ELL!
SELL!
THIS IS MADNESS! I CAN'T TAKE ANYMORE
GOOD BYE!
GOOD BYE?
BYE?
Buy?
BUY!
Buy!
BUY!!
Buy!
Bu
BUY!
I'VE GOT A STOCK HERE..



# ***Groupthink***

*It is better for one's reputation to fail conventionally than to succeed unconventionally.* - John Maynard Keynes

# *Anti-Herding Biases*

There is such a thing as an Anti-Herding Bias or Contrarianism, where individuals will assume a different perspective for the sake of being different or contrary to the mainstream view without much thought.

# *Availability Biases*

Availability Bias or the Short-term Bias represents the greater influence of the recent past than the long-term.

People will act, incorporate, and recall their recent experiences more vividly than the more distant past.

This bias causes people to repeat history, failing to learn from past events.

# *Biases*

Bankers and pundits may wonder why the markets tend to experience “bubbles” or exuberance.

Don’t we learn?  Of course, bankers learn, but the more near-term trends and events will weigh more heavily than the distant past.

# *Flipside of Biases*

The flipside to the short-term bias, where there is too much attention given to the long-term, thus ignoring emerging trends that make today a little different from yesterday.

*"History doesn't repeat, but it certainly rhymes"*
*Mark Twain*

# *Forecasting*

Do we really know what we think we know?

How confident can we be in our prognostications?

Will our guesses, estimates, and forecasts be affected by our bias and perceptions, thus coloring our sense of economic trends?

# *Exercise*

Consider two car owners who seek to reduce their costs:

Adam switches from a gas-guzzler of 12 MPG to a slightly voracious guzzler that runs at 14 MPG.

Beth switches from a 30 MPG car to one that runs at 40 MPG.

Question: Suppose both drivers travel 10,000 miles per year. Who will save more buy switching? Adam or Beth?

# *Exercise*

Are you sure?  Let's do some math…

Adam will reduce his consumption from 833 gallons to 714 gallons, thus for a savings of 119 gallons.

Beth will drop from 333 gallons to 250 gallons, thus saving only 83 gallons.

# *Exercise*

Your bias and how situations are "framed" will influence your perceptions and decisions.

Do you still trust what you initially think or perceive immediately?

If not, what to do?

# *Influences*

*“The trouble with the world is not that people know too little, but that they know so many things that ain't so.”*

*Mark Twain*

# *Are we certain?*

Interest rates are low. They must go up.

Interest rates have been falling. They may continue to fall.

Interest rates cannot go negative.

Oil can’t drop below $50 per barrel.

Interest rates can’t rise 400 bps quickly.

# *Are we certain?*

Do we really know what we think we know?

How confident can we be in our prognostications?

Our reluctance to forecast is not based upon the fear of being wrong, but rather, upon the fear from the needless consequences of being wrong.

It is an acknowledgement that we cannot really know, but rather guess.

# *Are we certain?*

And our guesses, estimates, and forecasts are influenced by our “human-ness,” which involves bias and perceptions coloring our sense of economic trends and decision-making.

# *Selective Perception & Retention*

1. We tend to read that which we agree with; We avoid that which disagrees with our preconceived biases, notions or ideologies;
2. Our biases change the way we perceive objects – literally, the way we see the world.
3. The same biases affect our memories – we retain *less* of what we disagree with . . .
4. *Expectations Affect Perception*

# *Exercise – Example 1*

Which Program would you select? Program A or Program B?

Imagine that the United States is preparing for the outbreak of an unusual exotic disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimates of the consequences of the programs are as follows:

- Program A: 200 people will be definitely saved.
- Program B: 1/3 probability that 600 people will be saved and a 2/3 probability that no people will be saved.

# *Exercise – Example 1*

Which Program would you select?

Remember that choice and read Example 2 below.

# *Exercise – Example 2*

Which Program would you select? Program A or Program B?

Imagine that the United States is preparing for the outbreak of an unusual exotic disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimates of the consequences of the programs are as follows:

Program A: 400 people will definitely die.

Program B: 1/3 probability that nobody will die and 2/3 probability that 600 people will die.

# *Exercise – Example 2*

Which Program would you select?

Compare your choice to Example 1.

Are they the same?

If not, why are your choices different?

# *Exercise*

In Example 1, many people may choose Program A; they prefer the certain option to save lives to the gamble of no lives saved.

In Example 2, many people may choose Program B; they prefer the gamble to save lives over the certainty of no lives saves.

# *Exercise*

Look closely and compare both Examples.

The consequences of Program A are the same in Examples 1 & 2; so are the consequences of Program B in Examples 1 & 2.

If the consequences are the same, why do people choose differently?

# *Framing*

Because of "framing," the choices between gambles and sure things are resolved differently, depending upon whether the outcomes ("frames") are good or bad.

Framing happens in the financial markets, too.

Do we really know what we think we know?

# *Framing*

How confident can we be in our prognostications?

Will our guesses, estimates, and forecasts be affected by our bias and perceptions, thus coloring our sense of trends?

# *Optimism*

We have an Optimism bias (helps our survival).

Our brains are better at processing good news about the future than bad.

*Anticipation of financial reward* > than actual benefits (Buy Rumor, Sell News)

# *Optimism*

We prefer stories to data.

Pre-writing, story-telling is how Humans evolved to share information.

We are vulnerable to anecdotes that mislead or present false conclusions unsupported by data.

# *Forecasting by Experts*

- Expert forecasters do no better than the average member of the public;
- The more confident an expert sounds, the more likely he is to be believed;
- Experts who acknowledge that the future is inherently unknowable are perceived as being uncertain – and therefore less trustworthy.
- The more self-confident an expert appears, *the worse their track record is likely to be*.
- Forecasters who get a single big outlier correct are more likely to underperform the rest of the time.

# *The Value of Projections*

Cash & the capacity to generate cash are what will repay your loan.

# *The Value of Projections*

Bankers and borrowers love to emphasize the five C’s of Credit:

- Character
- Capacity
- Collateral
- Capital
- Conditions

# *The Value of Projections*

Character: Integrity of the borrower.

Generally character is assumed to be good during times of expansion.  True test of character is never fully known until a recession hits or a material adverse event occurs.

# *The Value of Projections*

Capacity: Ability to generate sufficient cash flow to service debt obligations.

Projections deal the ability to evaluate the borrower's capacity to support future debt repayments.

# *The Value of Projections*

Collateral: Assets which secure the loan as a secondary source of repayment.

Collateral is generally the easiest to analyze with certainty.  Most lenders will comment that this loan is “well secured”.

Maybe because its hard to analyze capacity!

# *The Value of Projections*

Capital: Net worth of the borrower.

Generally these fall into capital assets, such as machinery and equipment. These depreciate over time! May also include real estate.

# *The Value of Projections*

Conditions: Prevailing economic conditions.

What are the current economic condition and how are these impacting your borrower?

Generally the impact is not fully seen until a recession hits.

# *The Value of Projections*

"Only when the tide goes out do you discover who's been swimming naked."

"The business schools reward difficult complex behavior more than simple behavior, but simple behavior is more effective."

Warren Buffett

# *Projections*

- Only cash and the ability to generate it can repay debt.
- Imperative that lenders take the time to analyze historical financial statements and develop realistic projections of future cash generation.
- Most commercial lenders are comfortable with their ability to analyze historical financial statements.

# *Projections*

A typical small business customer usually has less cash than the sum of current loans payable and current maturities of long-term loans.

The only way to obtain repayment is from future cash generation.

Thus, <u>only</u> financial projections of future cash flows can assure that your loan can be repaid.

# *Projections*

If the loan is for a short-term, seasonal purpose, then projections should generally be done on a monthly or quarterly basis for a one year period.

Projections should go out 3 to 5 years, depending on the length of time you have been in business.

The best projections include a balance sheet, income statement and statement of cash flow.

# *Projections*

Projections need to match the funding requests.

Bank will be on the lookout for inconsistencies.

The source of your repayment will be from the conversion of assets into cash: Inventory to A/R to Cash; or A/R to Cash

The borrower will have a historical collection cycle.

# *Projections*

The primary focus should be on the following:

- Inventory levels and turn period
- Accounts receivable and days outstanding
- Accounts payable and days outstanding
- Line of credit activity

Good projections also have a narrative that gives context as to how the forecast was constructed.

# *Projections*

- Issues arise if the borrower is loosing money for several months or is experiencing erratic profitability.
- Losses must also be added to the borrowing need, since the net worth account will decline by the amount of the loss.
- Your loan may be funding the expenses rather than just the asset growth.

# *Projections*

Loans which are expected to be repaid over a number of years usually require cash from the borrower's profitability.

An installment or term loan requires projections done on an annual basis generally for the next three years.

# *Projections*

Usually no more than three or four time periods are required for projections on either a short or long-term loan request.

More than 3-4 year forecasts become unreliable.

Funny (until recently) the FDIC asked banks for a 7 year forecast!

# *Projections*

Profitability must exceed the cash needs of growing assets (such as receivables and inventory).

Primary focus for annual projections:

- Sales
- Gross Profit
- Operating Expenses
- Interest
- Taxes
- Net Income

# *Projections*

Secondary focus for annual projections:

- Accounts Receivables
- Inventory
- Payables
- Real Estate (more space needs)
- Leasehold Improvements
- Machinery & Equipment.

If the balance sheet grows at a more rapid rate than the profits, then cash will be consumed unless replaced by a short term loan.

# *Projections*

Dozens of items can affect financial projections.

Excellent results can be obtained by focusing on the limited number of items discussed above.

Projections of future cash flows should be independently made by the lender.

Forces the lender to fully understand both financial statement analysis and the borrower's business.

# *Projections*

After the bank's projections are complete, then they can be compared to the borrower's projections.

Major differences should be discussed / reconciled.

Projections provided by the borrower should not be relied upon by themselves.

Most borrowers are smart enough to always show loan repayment.

# *Projections*

Fairly easy to perform when there are five or more years of historical statements to start the process.

Difficult to project the future with a new business or a business that has tremendous sales growth.

The younger or less stable the company, projections of cash generation are even more critical.

# *Projections*

Lenders owe it to their shareholders, depositors, and management to only lend when they are reasonably assured cash will be available in the future to repay the loan based on non-complex assumptions.

This assurance can only be determined by carefully constructed financial projections which show the capacity to repay.

# *Projections*

The other four C's of credit are helpful in making the loan decision, but have seldom (if ever) provided the cash to fully repay the loan.

The value of developing financial projections is:

1. better lending decisions;
2. better understanding of the borrower's business.

# *Sales Forecasts*

- Backbone of the business plan.
- Forecasting is mainly educated guessing.
- Need to have good research and facts.
- Obtain contracts and agreements.

# *Sales Forecasts*

*Develop a unit sales projection*

- Are assumptions consistent with industry benchmarks, market size, and historical performance.
- Unit sales per month.
- Break-down into smaller components.
- Use number of hours, meals, rides, etc.

# *Sales Forecasts*

*Use past data if you have it*

- Past sales data helps establish the forecast.
- Attempt to go back 2-3 years.
- Eliminate sales or customers that won’t reoccur

# *Sales Forecasts*

*Use factors for new products*

- New products are no excuse for lack of projections!
- Break down projected sales by similar products or services.

# *Sales Forecasts*

## *Optimistic & Pessimistic Forecasts*

- Entrepreneur's nature is to be bullish !
- Best case vs. Pessimistic Scenarios
- Find out if borrower is aware of downside and how to handle it.

# *Sales Forecasts*

*Determine the "Rhythm" Performance*

- Discover periods of highs and lows.
- Helps uncover other funding gaps.
- Helps determine realistic outlook.
- Weigh against others in the industry.

# *Sales Forecasts*

*Don't Get Stuck With a Static*

- How will forecast hold up under new developments?
- Back test to compare projections against actual results.
- Stay grounded in realistic growth assumptions.

# *Sales Forecasts*

*Break it down into small factors*

Examples:

- Average sales per square foot.
- Average estimated revenues per table.
- Average number of hours billed.

# *Sales Forecasts*

*Project prices*

- Know the market price for what is being sold.
- Compare projected margins to industry norms.
- Large deviations should be explained.
- Inflation or cost increases forecasted.
- Contracts that are tied to CPI or other escalations.

# *Sales Forecasts*

*Contract Based Business*

- Review backlog reports.
- Look at history with certain clients / retainers.
- Look back at bid and proposal history to see what percentage has been won.

# *Sales Forecasts*

*Home Builders*

- Ask the builder what the price of the home should be before getting other data.
- Obtain supporting information (BPO / Marketing Plan).
- Review comparable sales in market.
- Appraisal will be final determinate.
- Home will only sell for what market will bear.

# *Sales Forecasts*

*Real Estate Projects*

- Actual leases from owners.
- Leases will generally contain an annual escalation clause and how future rent will be determined.
- New projects should be based on current market rents for similar properties.
- Use third-party data to confirm rental rates.
- Properties will only rent for what market will bear.

# *Projecting Expenses*

- Most expenses are generally fixed.
- Historical costs provide good basis for projections.
- Labor and related costs generally make up high portion of a small business operating expenses.
- Review any leases or contracts.
- Make sure owner salaries are included.
- Don’t under estimate the other costs.
- Most owners can tell you more about the expenses than the sales!

# *Reviewing Projections*

- Compare against actual prior performance and industry to see if these are realistic for:
  - Sale trends
  - Gross Margins
  - Operating Expenses
  - Owners Compensation
  - Net Income
- Review figures against third party data, such as RMA.
- Compare forecasted performance to covenants.

# *Common Mistakes*

***Forgetting the Initial Investments***

- Money is required to startup the business.
- Need money for obtaining licenses, permits, and equipment.

*The moral here: It is necessary to include your initial investments too.*

# *Common Mistakes*

***"These projections are Conservative"***

- 99% of entrepreneurs say that their financial projections are conservative.
- 50% of startups fail within the first 5 years of business.
- No one would start a business if their financial projections showed that they would go bankrupt in 5 years.

# *Common Mistakes*

***No Assumptions Listed***

- Financial projections include dozens of assumptions.
- Make certain that you include a listing of important assumptions with your financial projections.

# *Common Mistakes*

***Capacity to deliver***

- If a business has never grown more than 10% annually, projections of 30% growth warrant deeper scrutiny.
- Can the business deliver on the forecast?

# *Common Mistakes*

***Top Down Assumptions***

- One of the fatal flaws that many entrepreneurs make while creating financial projections is making top down assumptions.
- Projections should be bottom-up.

# *Common Mistakes*

***No Scenario Analysis***

- Build your financial spreadsheet model in such a way that you can analyze various scenarios.
- Able to easily change assumptions so that you can analyze your financials for various scenarios.

# *Common Mistakes*

***Assumptions Not Based on Data***

The last assumption based mistake that many entrepreneurs make is creating assumptions that are not based on data.

# *Common Mistakes*

***Misunderstanding Cost of Goods Sold***

- It is easy to misunderstand and incorrectly categorize expenses in Cost of Goods Sold.
- COGS are the expenses that you would only incur if you sold a product or service.
- Expenses are incurred whether you make a sale or not, thus are a fixed expense or operating expense.

# *Common Mistakes*

***No Written Explanation***

- Many times a set of financial projections only include a P&L, cash flow statement, and a projected balance sheet.
- Include a detailed explanation with your assumptions and financial statements.
- If available, find financial information for the industry or competitors.
- Explain why you believe the projections are different whether they are better or worse than the competition.

# *Common Mistakes*

**No Bad Debt Expense**

- Owners commonly exclude bad debt expense from their budget.
- Bad debt expense can vary greatly depending on industry.
- There are few industries where you collect every dollar of revenue earned.
- This is an important consideration, and failing to include this line item in your forecast can be a warning sign.

# *Common Mistakes*

***Excluding Loan Payments***

- This is probably the worst mistake a borrower can make on a loan application.
- Projections should estimate the interest rate, amount, and length of loan to produce a projected monthly payment.
- Loan structure is inappropriate for type of request (ex. 100% financing for building or purchase of business).
- Make sure these fit your bank's current lending policies.

# *Common Mistakes*

***Excluding Taxes***

- Taxes can be a huge expense for a profitable company.
- Depending on the corporate structure a company might expect to pay 25% or more in taxes.
- Bankers get paid before taxes, but a failure to plan ultimately harms everyone.

# *Common Mistakes*

***Excluding Depreciation***

- Depreciation is a non-cash expense, but it is an expense nevertheless.
- Many of assets will decrease in value each year, and will need to be replaced eventually.
- Including depreciation expense in financial projections demonstrates long-term thinking about the business.

# *Common Mistakes*

***No Wiggle Room***

- If the financial projections leave no “wiggle room” everyone is going to be nervous.
- Lack of contingency planning.
- Leaving no margin for error means that if even one assumptions is wrong, the business could go bankrupt.
- Banks don’t take those kinds of risks!
- If projections are fragile, then maybe the borrower should focus on seeking investors.

# *Common Mistakes*

***No Breakeven Analysis***

- Determining how many units / revenue the borrower must achieve in order to breakeven.
- Revenue and expenses are equal.
- A breakeven analysis can help how many units / revenue a business must sell each day, month, and year.

# *Common Mistakes*

***Excluding Founder / Owner Salary***

- A sustainable business will pay the owner.
- If the projections never include an owner's salary, then there will be questions about the continued operations.
- If the business can't afford to pay its owner (through salary or profits) then this probably is not a business that a bank should finance.
- Include a modest owner salary to demonstrate truly realistic financials.

# *Common Mistakes*

***Lack of a Return on Equity or Profit***

If the Owner is not going to earn an appropriate return on equity or profit that is commensurate with the risk then how safe is your bank’s loan!

# *Contact Information*

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