FMWC

# FINANCIAL PLANNING

## FOR SMEs

Author: Andrew Grigolyunovich,
CFA, MFM, FMVA

# TABLE OF CONTENTS


1. Goal Setting
   1.1. Questions to Ask
   1.2. Limiting Factors
   1.3. Typical Errors
   1.4. Execution
2. Defining Assumptions
3. Choosing the Right Tools
4. The Structure of a Budget
   4.1. Projecting Sales and Cost of Goods Sold
   4.2. Projecting Sales Amounts
   4.3. Projecting Cost of Goods Sold
5. Projecting Other Costs
6. Consolidation
7. Evaluation
   7.1. Sensitivity Analysis
   7.2. Ratio Analysis


www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

# FINANCIAL PLANNING

## FOR SMEs

## Chapter 1 - Goal Setting

Author: Andrew Grigolyunovich, CFA, MFM, FMVA

www.fmworldcup.com

TABLE 1. STEPS IN THE BUDGETING PROCESS

The planning process starts with goal setting – that is the part of the process that is so often omitted and forgotten, although it definitely shouldn't be.

During this step you should define what is expected from the company – high level of profits, great dividend payout rate or a high growth rate.

In this chapter we will explore the essentials of goal setting:

1 Questions to Ask

2 Limiting Factors

3 Typical Errors

4 Execution

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

# QUESTIONS TO ASK

The main question you need to answer yourself is very simple:

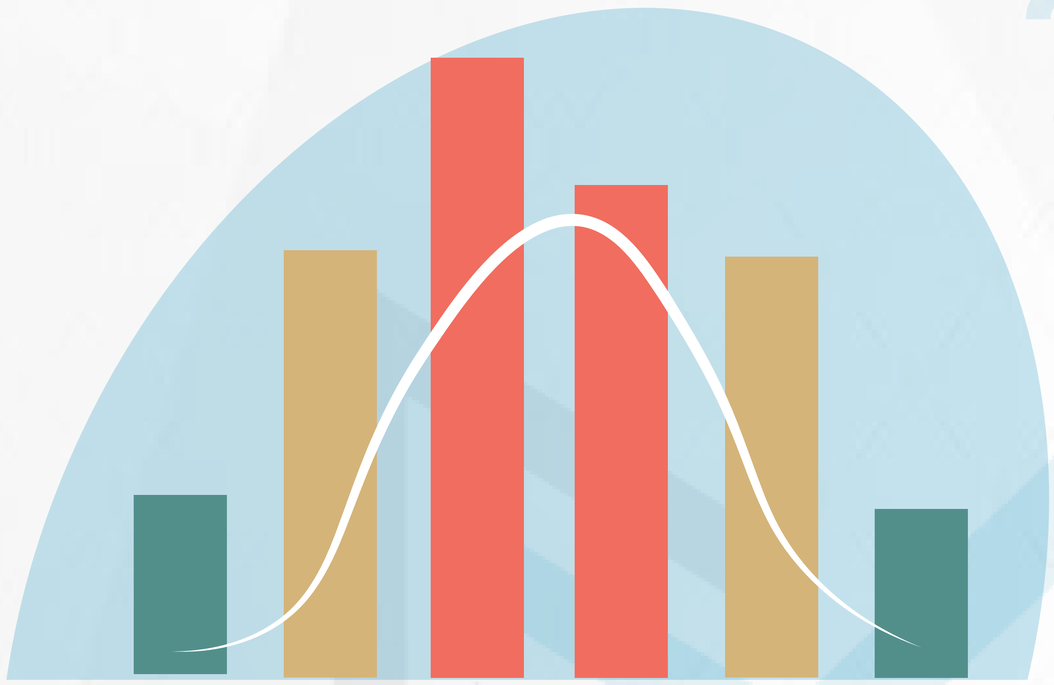
**"What do we want to achieve next year?"**

The goals vary and possible actions that a company would take next year vary widely with them:

1. **We want to become leaders in our market segment/niche**
2. **We want to increase the company's profit and net margins before a possible sale of the business** – the goal is to reach $10 mln in net income at a 15% net margin
3. **We want to maximize the level of dividends for the owners** – so we set the goal to pay out $1 mln every month as dividends
4. **We are in a tough financial situation, and we want just to survive** – the goal is to keep cash at or above 0 throughout the year

## PLEASE NOTE! GOALS NEED TO BE:

1. Precise
2. Specific
3. Achievable



www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

# LIMITING FACTORS

To get the goals correctly, you should also consider your limiting factors or constraints. Some of the limiting factors might be imposed on you by creditors, investors and, actually, yourself.

## 1 Bank Covenants

If a company has a bank loan, usually in the agreement you will find not only an obligation to pay interest and principal, but also to comply with several financial ratios or covenants.

## 2 Investor Requirements

If a company has received private external financing the investors will have their requirements regarding return on their investment which means profit level requirements to the company.

## 3 Owner's Private Needs

For single-owner companies, the annual cost of keeping the owner's standard of living should be considered in order to define the required level of dividends from the company.

## EXAMPLES OF DIFFERENT LIMITING FACTORS:

**Bank Covenants**

- Keep debt/EBITDA ratio not higher than 3.5
- Keep monthly sales at least as high as the credit line limit (overdraft)
- Keep the current ratio not lower than 2

**Investor Covenants**

- Pay a 5% return every year
- Work with specific partners
- Include a specific person in the management

**Personal Covenants**

- Set the level of a company distribution
- Write off personal expenses
- Going on business trips in a private jet 😅

Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

www.fmworldcup.com

# TYPICAL ERRORS

To get the goals correctly, you should also consider your limiting factors or constraints. Some of the limiting factors might be imposed on you by creditors, investors and, actually, yourself.

## 1 Setting Overly Ambitious Goals

Such goals can distract and demotivate employees as well as lead to severe other organizational problems.

## 2 Not Taking into Account Economic Developments

Companies need to closely monitor forecasted economic Developments to set appropriate goals.

## 3 Not Warning Owners About Goal Unattainability

We've seen examples of companies where employees silently accept whatever is put on them by the owners of the company. Nothing good happens in such companies, especially if the goals are unattainable from the very beginning.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

# EXECUTION

Now it is time to execute by setting specific measurable attainable goals for your company for the next financial year.

You can use the table below as a guide. It has been limited to three lines deliberately.

Setting too many goals would just scatter your attention during the year. It is even better to have just one simple goal that would be easy to express to your employees.

My company's financial goals for the year _____

**GOAL 1**

_____

_____

**GOAL 2**

_____

_____

**GOAL 3**

_____

_____

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# FINANCIAL PLANNING

## FOR SMEs

## Chapter 2 - Defining Assumptions

Author: Andrew Grigolyunovich, CFA, MFM, FMVA

www.fmworldcup.com

FMWC

# DEFINING ASSUMPTIONS

OK, we've set the goals for the company (to read the previous chapter on goal setting visit our LinkedIn page). Now it's time to establish your key assumptions.

The main goal for setting the assumptions is to get a common view over the next planning period among all the members involved in the financial planning process.

! It is crucial for each department to have the same vision of what is expected of the company !

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

The main categories that need to be covered by the assumptions:

1. **Economic factors - industry growth, GDP growth, level of inflation, interest rates, etc.**

2. **Currency rates - especially if your company is involved in international business.**

3. **Possible changes in the applicable taxes in every market your company is serving.**

4. **Changes in pricing/markup policies of the company - for exchange-traded goods or raw materials, you need to use a unified forecast for the price fluctuations of the goods.**

5. **Possible expansion projects within the company – whether and when you plan to build a new factory or open a new shop. It is a good idea to let your HR department know these plans in advance so that they are able to budget their expenses accordingly.**

6. **Other significant risk factors to the company.**

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

An example of a key assumption sheet is shown below. This is part of the budget of a fictional company "Happy Retailer". This company budget projects flat industry sales; an inter-bank borrowing rate of 2%, a specific sales tax rate for each of its shops, as well as it makes a projection on the applicable tax system. All these numbers are automatically linked to the corresponding parts in the budget and will automatically adjust the final results should they be changed.

| Happy Retailer, LIC Main Assumptions. Budget. 2024 | |
|---|---|
| Company Name | Happy Retailer, LLC |
| Financial Year | 2024 |
| Employer ID Number | 987654321 |
| Financial Year begins in | January |
| Base Currency | $ |

| State of the Economy by Month | | |
|---|---|---|
| Month | Sales +/- vs. plan | Prime Rate |
| Jan | 0.00% | 5.5% |
| Feb | 0.00% | 5.5% |
| Mar | 0.00% | 5.5% |
| ..... | ..... | ..... |
| Dec | 0.00% | 5.5% |

| Existing Shops | | | |
|---|---|---|---|
| Existing Shops | Sales Tax | Monthly Rent | Employee Count |
| Mall of America | 9.80% | $1,000 | 7 |
| King of Prusia Mall | 6.00% | $2,400 | 5 |
| Palisades Center | 7.50% | $3,000 | 10 |
| The Galleria | 10.50% | $1,400 | 6 |
| Sawgrass Mills | 8.00% | $2,600 | 11 |
| Woodfield Mall | 8.00% | $3,800 | 13 |
| Del Amo Fashion Center | 8.00% | $2,350 | 8 |
| South Coast Plaza | 8.00% | $1,900 | 9 |

| Tax | |
|---|---|
| Tax | Rate |
| Payroll Taxes | 9.70% |
| Other Payroll Related Benefits | 10.00% |

| New Shops | | |
|---|---|---|
| New Shops | Opening | Sales Tax |
| Aventura Mall | Apr | 6.00% |
| Millcreek Mall | Sep | 0.00% |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

We have also created a table for you so that you are able to create your own list of assumptions.

| Key Assumptions for the year _____ | |
|---|---|
| Company Name | |
| Financial Year | |
| Base Currency | |

| Key Product Sale and Raw Material Purchase Prices | | | | | |
|---|---|---|---|---|---|
| Month | Price, $/ _____ | Price, $/ _____ | Price, $/ _____ | Price, $/ _____ | Price, $/ _____ |
| Jan | | | | | |
| Feb | | | | | |
| Mar | | | | | |
| ..... | | | | | |
| Dec | | | | | |

| Currency and Interest Rates | | | | | |
|---|---|---|---|---|---|
| Month | Interest rates | _____/$ | _____/$ | _____/$ | _____/$ |
| Jan | | | | | |
| Feb | | | | | |
| ..... | | | | | |
| Dec | | | | | |

| Taxes | |
|---|---|
| Tax | Rate |
| Average Payroll Taxes | ____ % |
| Other Payroll Related Benefits | ____ % |
| Sales Tax | ____ % |

| Macroeconomy | |
|---|---|
| Macroeconomy | Rate |
| GDP Growth Rate | ____ % |
| Industry Growth Rate | ____ % |
| Inflation Rate | ____ % |

| New Projects | |
|---|---|
| New Projects | Launch Month |
| | |
| | |
| | |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# FINANCIAL PLANNING

## FOR SMEs

## Chapter 3 - Choosing the Right Tools

Author: Andrew Grigolyunovich, CFA, MFM, FMVA

www.fmworldcup.com

FMWC

# CHOOSING THE RIGHT TOOLS

After we've set the appropriate goals and defined assumptions (to read these chapters visit our LinkedIn page), it's time to move to another important step – choosing the right tools for financial planning.

You might think that you need special software for financial planning, which is hard to learn and expensive. However, if you are not running a large organization, you most likely will be more than good by just using Microsoft Excel.

Still, even the advocates of budgeting software admit that no software possesses as much flexibility as Microsoft Excel. Moreover, users can create financial planning models according to their needs.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

There are 4 options that you might considering while choosing the financial planning tools (ranked by final cost to you, except for the value of your time):

## 1 Create an Excel spreadsheet model for your company yourself

This might require some intermediate level of Excel knowledge and some basic understanding of finance principles if you wish to create a flexible budget with linked P&L, cashflow statement and Pro-forma balance sheet. In this case, you might want to download a demo file from www.cfotemplates.com that corresponds to your industry. This might give you some great ideas on how to design and structure your budget at no cost.

## 2 Get a pre-built Excel template applicable to your industry

This is an option that saves you time and money. Once again I would recommend www.cfotemplates.com. The templates are created by financial professionals and the company specializes in financial templates for professionals. They also offer customization of templates for customer needs at a very affordable rate.

This option is great if you value your time, as the time-consuming process of creating the financial planning model has already been done by someone else.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

## 3 Use a consulting company that specializes in corporate finance

**In this case, you save even more time by getting everything right from the start. Just make sure that the company is very experienced in developing budgeting systems. A financial consulting firm will also train you and create an Excel model that you can manage yourself. Once again, my recommendation is AG Capital CFO Services. They have introduced budgeting systems for hundreds of clients. It might also be the most cost-effective way to do your budgeting as the company is located in Latvia, a lower-income member of EU.**

## 4 Hire an experienced CFO who would create a budgeting system as a part of his job.

**However, you have to weigh all the pros and cons before hiring this person since this would usually be a significant increase in your administration costs. You need to be very sure that you can afford a CFO before you hire one.**

Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

www.fmworldcup.com

# WANT TO LEARN MORE?

**Sign up for the training camp in Las Vegas!**

THE ACTIVE CELL

## LEARN FROM CHAMPIONS!

- Excel Training Camp
- Financial Modeling Training Camp
- Microsoft Excel World Championship 2023 Finals

**Las Vegas | December 7-9, 2023**

Learn more

www.fmworldcup.com/the-active-cell/

Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

www.fmworldcup.com

# FINANCIAL PLANNING

## FOR SMEs

## Chapter 4 - The Structure of a Budget

Author: Andrew Grigolyunovich, CFA, MFM, FMVA

www.fmworldcup.com

FMWC

# THE STRUCTURE OF A BUDGET

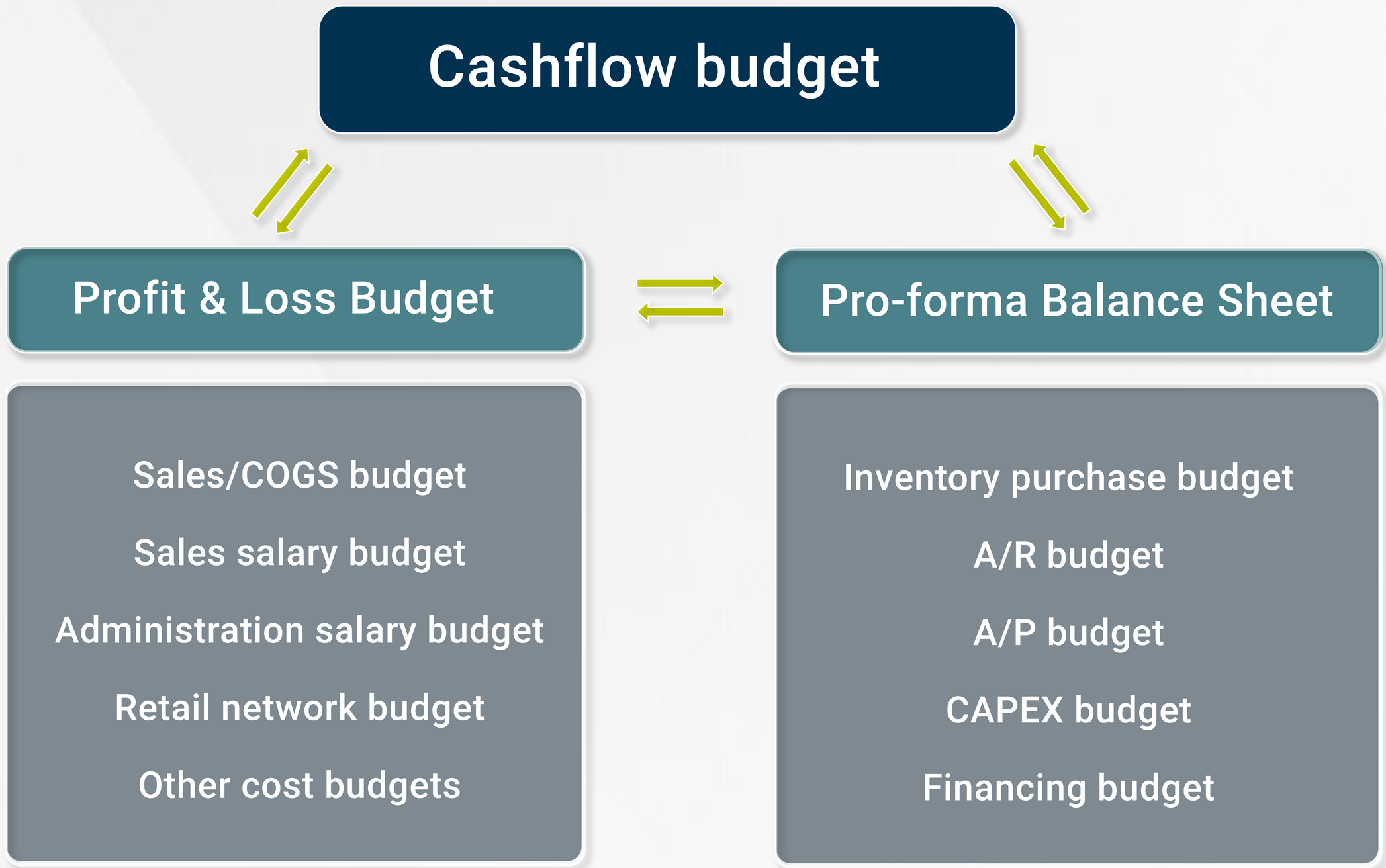



TABLE 1. The structure of a sample budget

To create a budget for a company you need to create separate budgets for sales, cost of goods sold, salaries, etc. Then these projections are linked together in the Profit & Loss budget. The same procedure is repeated for components of a balance sheet.

Finally, the numbers in the P&L and balance sheet projections are combined together and the cashflow budget is derived. After that, you can gauge whether the projected cash flows are adequate and meet your goals.

Note that the projections of all three main financial statements are interconnected – if anything changes in one of them, the changes will automatically be reflected in the other statements.

Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

fmworldcup.com

# PROJECTING SALES & COST OF GOODS SOLD

## CREATING TABLES FOR THE SALES BUDGET

Understanding the interconnections between sales results, variable costs, key sales drivers, and working capital is crucial in financial planning. This varies across industries, as demonstrated in this book's example of creating a financial plan for a retail company. Factors such as the number of locations and seasonality greatly influence sales.

| Happy Retaller, LIC Sales 2021 | | | | | | |
|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | ... | Dec | Total |
| Net Sales by Shop | 3,590,878 | 3,590,878 | 3,130,878 | ··· | 3,987,545 | 40,000,000 |
| Existing shops | 3.590,878 | 3,590,878 | 3,130,878 | ··· | 3,437,545 | 36,865,200 |
| Mall of America | 502,167 | 436,667 | 436,667 | ··· | 480,333 | 5,139,567 |
| King of Prusia Mall | 551,044 | 487,544 | 487,544 | ··· | 529,878 | 5,753,167 |
| Palisades Center | 377,583 | 328,333 | 328.333 | ··· | 361,167 | 3,864,483 |
| The Galleria | 377,583 | 328,333 | 328.333 | ··· | 361,167 | 3,864,483 |
| Sawgrass Mills | 425,500 | 370,000 | 370,000 | ··· | 407,000 | 4,354,900 |
| Woodfield Mall | 431,250 | 375,000 | 375,000 | ... | 412,500 | 4,413,750 |
| Del Amo Fashion Center | 471,500 | 410,000 | 410,000 | ... | 451,000 | 4,825,700 |
| South Coast Plaza | 454,250 | 395,000 | 395,000 | ··· | 434,500 | 4,649,150 |
| New shops | 0 | 0 | 0 | ··· | 550,000 | 3,134,800 |
| Aventura Mall Apr | 0 | 0 | 0 | ··· | 264,000 | 2,068,800 |
| Millcreek Mall Sep | 0 | 0 | 0 | ··· | 286,000 | 1,066,000 |
| Scenario correction | 0.00% | 0.00% | 0.00% | ··· | 0.00% | |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

| Inputs | | | | | | |
|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | ... | Dec | Total |
| Base case scenario | 3,590,878 | 3,590,878 | 3,130,878 | ··· | 3,987,545 | 40,000,000 |
| Existing shops | 3.590,878 | 3,590,878 | 3,130,878 | ··· | 3,437,545 | 36,865,200 |
| Mall of America | 502,167 | 436,667 | 436,667 | ··· | 480,333 | 5,139,567 |
| King of Prusia Mall | 551,044 | 487,544 | 487,544 | ··· | 529,878 | 5,753,167 |
| Palisades Center | 377,583 | 328,333 | 328.333 | ··· | 361,167 | 3,864,483 |
| The Galleria | 377,583 | 328,333 | 328.333 | ··· | 361,167 | 3,864,483 |
| Sawgrass Mills | 425,500 | 370,000 | 370,000 | ··· | 407,000 | 4,354,900 |
| Woodfield Mall | 431,250 | 375,000 | 375,000 | ... | 412,500 | 4,413,750 |
| Del Amo Fashion Center | 471,500 | 410,000 | 410,000 | ... | 451,000 | 4,825,700 |
| South Coast Plaza | 454,250 | 395,000 | 395,000 | ... | 434,500 | 4,649,150 |
| New shops | 575,000 | 500,000 | 500,000 | ··· | 550,000 | 5,885,000 |
| Aventura Mall Apr | 276,000 | 240,000 | 240,000 | ··· | 264,000 | 2,824,800 |
| Millcreek Mall Sep | 299,000 | 260,000 | 260,000 | ··· | 286,000 | 3,060,200 |

Note, that there are actually two tables with a similar structure – the Sales budget and the Inputs.

www.financialmodelingworldcup.com

**Projecting sales in a manner like this gives two advantages compared to a budget that has just a sales table:**

1. Ability to adjust the scenario for opening the new shops by just changing the planned opening date in the Assumptions.

2. Ability to adjust the sales scenario on a company level with just a couple of clicks.



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# GETTING THE RIGHT LEVEL OF DETAILS

Now we've got sales projections by month and by shop.

In retail budgeting, it's crucial to break down sales by product groups due to varying sales patterns and markups. Each shop sells different product groups with different mixes, influencing the cost of goods sold.

For example, increasing sales of Shirts in one store may lead to a decrease in projected sales for other product groups. Sales breakdown by product groups influences overall sales and cost projections.

| Sales by product groups | Mall of America | King of Prusia Mall | Palisades Center | The Galleria | Sawgrass Mills | Woodfield Mall | Del Amo Fashion Center | South Coast Plaza | Aventura Mall | Milcreek Mall |
|---|---|---|---|---|---|---|---|---|---|---|
| Shirts | 10% | 20% | 15% | 10% | 10% | 10% | 10% | 15% | 10% | 10% |
| Jeans | 20% | 10% | 15% | 20% | 20% | 5% | 20% | 15% | 20% | 20% |
| Jackets | 15% | 10% | 15% | 15% | 15% | 10% | 15% | 15% | 15% | 15% |
| Sportswear | 5% | 10% | 10% | 10% | 10% | 10% | 5% | 10% | 10% | 5% |
| Swimwear | 5% | 5% | 10% | 10% | 10% | 20% | 5% | 10% | 10% | 10% |
| Socks | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| Shoes | 15% | 15% | 5% | 5% | 5% | 15% | 15% | 5% | 5% | 5% |
| Sweaters | 5% | 10% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 10% |
| Pants | 10% | 5% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Coats | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

# The possible levels of details for sales projections

You should not go to any of the extremes of too much or too few details. The best way is to either predict total July sales in one shop or to predict July sales of T-shirts in one shop. Getting into more details, in this case, would not pay out in terms of the precision of forecasts.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

# DETERMINING DETAILS FOR OTHER INDUSTRIES

We have seen the example of a retail company deciding on the layout of its sales budget but what about other industries?

The first question that you need to answer for yourself is: “what is the basis for my forecast - units or money?”.

**Example**

A company that is manufacturing and selling wooden pellets can usually predict sales volumes in tons but not in dollars since the prices for pellets fluctuate significantly over the year.

Then, if you decide to go for units, you will have to connect units with dollars (the budget is a financial plan, so we plan in dollars, not in units). The most convenient way is to make a special table in the Assumptions where it is possible to predict average selling prices in each particular month.

**Example**

A chain of gas stations might forecast their sales in gallons and put an average price per gallon in the Assumptions part of the budget for gas of each octane number.

General scheme of forecasting:

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# THE BEST PRACTICES FROM VARIOUS INDUSTRIES

## 1 Catering companies, cafés, and restaurants

Similarly to retail companies, they forecast monthly sales by location and further break them down by different product groups. This breakdown is crucial because markups for coffee differ significantly from those for main courses.

## 2 Professional services companies (business consultants)

They usually project their income in units, the number of service hours they plan to sell each month. Then they multiply the number of hours by the service price per hour.

## 3 Technical services (e.g., automobile workshops)

Such businesses project income by multiplying the number of hours sold by the average hourly price of services. They also estimate revenue from selling spare parts based on historical data and the number of hours sold.

## 4 Marketing agencies

They forecast sales by month and by clients, particularly if they have negotiated budgets for the upcoming year. It's beneficial to make projections by products due to varying pricing strategies and markups.

## 5 Retailers

As discussed, they forecast sales by month, location, and product groups. Projections can be based on dollars or units, depending on the type of business. Retailers that sell more expensive items usually project sales in units, while those selling less expensive items project sales in dollars.

Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

## 6 Wholesalers

They forecast sales by month, sales channels, and product groups. Detailed projections are crucial due to varying margins across channels and product groups. Accuracy is essential for wholesalers operating on narrow margins.

## 7 Manufacturing companies

Manufacturers project sales by month, sales channel, and product group. Forecasting basis (units or dollars) depends on two factors. Firstly, higher-priced products favor unit-based forecasting, while lower-priced products lean towards dollar-based forecasting. Secondly, price fluctuations determine the basis, with volatile prices favoring unit-based forecasts and stable prices favoring dollar-based forecasts.

## 8 Construction companies

These businesses face unique challenges in sales forecasting. Smaller subcontractors have contracts expiring in the first half of the year, with uncertain business prospects for the second half. They can accurately project sales for the initial months but must rely on educated guesses for the latter part of the year.

## 9 Airlines

They forecast income by analyzing individual flights, considering factors such as the flight schedule, number of rotations per month, and projected income per rotation. Passenger flights may use average occupancy rates, while cargo flights often rely on fixed amounts to determine income per rotation.

## 10 Real estate companies

They forecast income for each individual unit of real estate, taking into account factors such as rental income per month per premise. They also consider possible vacancy rates, which are factored in as a "discount" to the maximum sales potential.

Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# PROJECTING SALES AMOUNTS

We have decided on the level of details for sales projections and now we have the tables for making the base case sales forecasts. But how do we know what numbers to input for each shop in each particular month?

## METHOD 1. HISTORICAL RESULTS

For established businesses with regular customer flow, (like retail), the best way to forecast the future is to analyze past results. The idea is very simple – get historical results for the previous year, look for seasonal patterns, consider recent and forecasted developments in the industry and in the economy and try to adjust the historical results taking into account economic developments.

It is very important to look for seasonal patterns in the historical results.

Now that we have determined the historical seasonality, it's time to forecast the planned results taking into account the assumed growth rate.

The action flow in the case of using this method is shown below.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# METHOD 2. BREAK-EVEN LEVEL OF SALES

Method 1 is the easiest to understand and apply, however, the problem is that there are industries like construction, whose business is project-based, and the projects can be forecasted only within a limited time frame.

So, the solution is to begin by forecasting fixed costs instead of sales. This helps determine the break-even point and the sales level needed to achieve

The critical part here is to determine how achievable the sales goals are. If they seem unrealistic then a reduction of fixed costs is needed.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

FMWC

# PROJECTING SALES FOR NEW BUSINESS UNITS

One of the trickiest parts of the planning process is to forecast income for new business within a company. The new business might be a new shop for a retail company, a new restaurant for a chain of restaurants, a new product group for a wholesaler, etc.

Forecasting for a startup is even trickier, as in such cases the business model itself has not yet proven itself.

The easiest way to forecast sales for a new business unit is to compare it with an existing one.

Sometimes a company's new business unit's sales actually are the best during the first month of operations. This holds true when a very sought-after product or retailer comes to the market.

The picture above depicts a queue to McDonald's in Moscow in 1990. They have never had such good sales in this restaurant since then.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

# PROJECTING COST OF GOODS SOLD

| Product group | Markup |
|---|---|
| Shirts | 104% |
| Jeans | 83% |
| Jackets | 73% |
| Sportswear | 88% |
| Swimwear | 83% |
| Socks | 104% |
| Shoes | 73% |
| Sweaters | 78% |
| Pants | 83% |
| Coats | 88% |

We have already created a sales budget for the company, but now we need to understand what the cost of goods are. In many industries the cost of goods (COG) or cost of materials is usually the greatest variable expense item.

While assuming consistent markups throughout the year works in this case, companies with seasonal pricing strategies may forecast monthly markups.

**Example**

Food processing companies may increase egg prices before Easter without changing the cost of goods. Once COG is calculated for each product group, we can also calculate it by shop based on the sales breakdown.

## The planning process for a retail company is as follows:

1. Forecast sales by shops
2. Forecast each product group's share of sales for each shop
3. Derive sales by product groups
4. Forecast average markups for each product group
5. Derive the cost of goods sold for each product group
6. Derive the cost of goods sold for each shop

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

| Happy Retaller, LIC Sales 2021 | | | | | | |
|---|---|---|---|---|---|---|
| COGS by Shop | Jan | Feb | Mar | ... | Dec | Total |
| Net Sales by Shop | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,122 | 21,686,505 |
| Existing shops | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 1,863,685 | 19,986,396 |
| Mall of America | 274,105 | 238,353 | 238,353 | ··· | 262,188 | 2,805,409 |
| King of Prusia Mall | 296,837 | 262,631 | 262,631 | ··· | 285,435 | 3,099,123 |
| Palisades Center | 203,527 | 176,980 | 176,980 | ··· | 194,678 | 2,083,050 |
| The Galleria | 204,577 | 177,893 | 177,893 | ··· | 195,683 | 2,093,804 |
| Sawgrass Mills | 231,199 | 201,042 | 201,042 | ··· | 221,147 | 2,366,268 |
| Woodfield Mall | 234,363 | 203,794 | 203,794 | ... | 224,173 | 2,398,651 |
| Del Amo Fashion Center | 257,366 | 223.797 | 223.797 | ... | 246,176 | 2,634,087 |
| South Coast Plaza | 244,852 | 244,852 | 244,852 | ... | 234,206 | 2,506,004 |
| New shops | 0 | 0 | 0 | ··· | 298,437 | 1,700,109 |
| Aventura Mall Apr | 0 | 0 | 0 | ··· | 143,037 | 1,120,890 |
| Millcreek Mall Sep | 0 | 0 | 0 | ··· | 155,400 | 579,219 |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

# FINANCIAL PLANNING

## FOR SMEs

## Chapter 5 - Projecting Other Costs

Author: Andrew Grigolyunovich, CFA, MFM, FMVA

www.fmworldcup.com

# STRUCTURING COST BUDGETS

Each company has many different cost types. In order to get a clear view of the budget it is important to divide the costs into specific budgets and put each into a separate worksheet.

The key to creating the correct number of cost budgets is to understand which departments have responsibilities for these costs.

For example, Happy Retailer's budget contains the following cost budgets:

- Retail Network Cost Budget
- Sales Personnel Salary Budget
- Administrative Personnel Salary Budget
- HR Budget
- Marketing Budget
- Other Selling Cost Budget
- Other Operating Cost Budget
- Administration Cost Budget
- Capital Expenditure Budget
- Financing Budget

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

## 1 Structure

What are your company's departments? Do they incur and control costs that no other department does? For example, some costs, like salaries and telecommunication, are shared among departments and can be included in consolidated budgets. Other costs, like online marketing, are specific to certain departments and require separate budgets for accurate tracking and management.

## 2 Responsible Persons

Who is responsible for what? If an IT manager is responsible not only for IT equipment and software but also for controlling telecom costs, it might be a good idea to include the telecom costs into IT budget.

## 3 Cost Variability

Sometimes it is a good idea to divide costs into variable and fixed and to create 2 separate cost budgets.

## 4 Marketing Agencies

Costs that the company has little flexibility over, like rent for the shops, might be put into a separate cost budget.

| My company's budget will have the following cost budgets: | |
|---|---|
| | |
| | |
| | |
| | |
| | |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# PROJECTING SALARIES

In our example, Happy Retailer's salary projections are divided into 2 separate budgets – sales personnel salaries and administration salaries.

Sales personnel tend to have higher rotation levels, so salaries are projected on a shop level.

It is important to understand how many people are needed for each of the shops and what the salary system is. What are the average base salaries and what percentage of turnover is paid to the personnel? These assumptions are entered into the assumption table on the sales personnel salary budget.

| Sales Personnel Salaries & Commissions | | | |
|---|---|---|---|
| Shops | Base Salary | % | % |
| Mall of America | 30,500 | 2% | 8 |
| King of Prusia Mall | 36,500 | 2% | 9 |
| Palisades Center | 38,500 | 2% | 10 |
| The Galleria | 37,800 | 2% | 5 |
| Sawgrass Mills | 39,000 | 2% | 5 |
| Woodfield Mall | 33,000 | 2% | 7 |
| Del Amo Fashion Center | 33,000 | 2% | 7 |
| South Coast Plaza | 33,000 | 2% | 7 |
| Aventura Mall | 37,500 | 2% | 8 |
| Millcreek Mall | 40,000 | 2% | 8 |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

Then the numbers from the Assumption table are automatically linked to the salary budget:

| Happy Retailer, LLC Sales Persons Salary Budget 2021 | | | | | | |
|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | ... | Dec | Total |
| Total | 288,907 | 277,894 | 277,894 | ... | 360,248 | 3,789,902 |
| Gross Salaries | 241,359 | 232,159 | 232,159 | ... | 300,959 | 3,166,167 |
| Existing shops | 241,359 | 232,159 | 232,159 | ... | 238,293 | 2,771,804 |
| Mall of America | 30,377 | 29,067 | 29,067 | ... | 29,940 | 346,791 |
| King of Prusia Mall | 38,396 | 37,126 | 37,126 | ... | 37,973 | 443,563 |
| Palisades Center | 39,635 | 38,650 | 38,650 | ... | 39,307 | 462,290 |
| The Galleria | 23,302 | 22,317 | 22,317 | ... | 22,973 | 266,290 |
| Sawgrass Mills | 24,760 | 23,650 | 23,650 | ... | 24,390 | 282,098 |
| Woodfield Mall | 27,875 | 26,750 | 26,750 | ... | 27,500 | 319,275 |
| Del Amo Fashion Center | 28,680 | 27,450 | 27,450 | ... | 28,270 | 327,514 |
| South Coast Plaza | 28,335 | 27,150 | 27,150 | ... | 27,940 | 323,983 |
| New shops | 0 | 0 | 0 | ... | 62,667 | 394,364 |
| Aventura Mall Apr | 0 | 0 | 0 | ... | 30,280 | 266,376 |
| Millcreek Mall Sep | 0 | 0 | 0 | ... | 32,387 | 127,988 |
| Payroll Taxes | 23,412 | 22,519 | 22,519 | ... | 29,193 | 307,118 |
| Other Payroll Related Benefits | 24,136 | 23,216 | 23,216 | ... | 30,096 | 307,118 |
| Number of Salespeople | 58 | 58 | 58 | ... | 74 | 67 |
| Avg Gross Salary | 4161 | 4003 | 4003 | ... | 4067 | 3959 |

An important factor to take into account is the salary level that your employees are going to receive on average. Given the sales figures and the salary system, are you overpaying or underpaying, compared to your competitors? Will you be able to attract top employees to work for what you offer them?

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

Forecasting of administration salaries takes a different approach. First of all you should review your personnel schedule and the salary system for each position.

It is very important to distinguish between the positions with fixed salaries and those that have some variable parts of their compensation package.

**Happy Retailer, LLC Sales Administration Salary Budget 2021**

| | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| Total | 114,792 | 114,792 | 114,792 | ... | 114,792 | 1,377,504 |
| Gross salaries | 95,900 | 95,900 | 95,900 | ... | 95,900 | 1,150,800 |
| CEO | 20,800 | 20,800 | 20,800 | ... | 20,800 | 249,600 |
| CFO | 12,500 | 12,500 | 12,500 | ... | 12,500 | 150,000 |
| COO | 12,500 | 12,500 | 12,500 | ... | 12,500 | 150,000 |
| Head of Sales and Marketing | 10,000 | 10,000 | 10,000 | ... | 10,000 | 120,000 |
| Purchase Specialist | 7,500 | 7,500 | 7,500 | ... | 7,500 | 90,000 |
| Marketing Specialist | 7,900 | 7,900 | 7,900 | ... | 7,900 | 94,800 |
| Personnel Specialist | 7,500 | 7,500 | 7,500 | ... | 7,500 | 90,000 |
| Chief Accountant | 7,100 | 7,100 | 7,100 | ... | 7,100 | 85,200 |
| Head of Logistics | 5,500 | 5,500 | 5,500 | ... | 5,500 | 66,000 |
| System Administrator | 4,600 | 4,600 | 4,600 | ... | 4,600 | 55,200 |
| Payroll Taxes | 23,412 | 22,519 | 22,519 | ... | 29,193 | 307,118 |
| Other Payroll Related Benefits | 24,136 | 23,216 | 23,216 | ... | 30,096 | 307,118 |
| Number of Salespeople | 58 | 58 | 58 | ... | 74 | 67 |
| Avg Gross Salary | 4161 | 4003 | 4003 | ... | 4067 | 3959 |



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

So, when making projections for your company, ask yourself:

1. What positions do we have? Create a list
2. If we expand our operations, what other positions shall we have? When do we plan to add them to the staff?
3. Does each of the positions have some sort of motivation system that is reflected in the P&L statement? For example, stock options for the top management are rarely reflected in the books before their execution
4. What factors influence the bonus for each employee? Link sales agents' salaries to projected sales levels and base salaries for back office employees to the average historical score on the balanced scorecard to determine bonus amounts.
5. What are the applicable taxes and what percentage of salaries that we offer as additional benefits? The additional benefits might be even projected in detail for each position.

And, last but not least, businesses usually forecast salaries by the position not by the person:

| My company's administration personnel: | | | |
|---|---|---|---|
| Position: | Marketing Assistant | ☐ Fix/ ☑ Var | Factors: Sales increase during campaigns |
| Position: | | ☐ Fix/ ☐ Var | Factors: |
| Position: | | ☐ Fix/ ☐ Var | Factors: |
| Position: | | ☐ Fix/ ☐ Var | Factors: |
| Position: | | ☐ Fix/ ☐ Var | Factors: |
| Position: | | ☐ Fix/ ☐ Var | Factors: |



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# PROJECTING MARKETING COSTS

Estimating marketing costs can be challenging. Companies typically have flexibility with their marketing budgets, except when bound by long-term agreements with agencies. For small and medium-sized companies handling their own marketing, here are some helpful tips.

Allocate sufficient funds for seasonal activities to avoid overspending or missing out on potential business. Neglecting to provide the necessary marketing funds during periods of increased sales can lead to undesirable outcomes.

**Happy Retailer, LIC Marketing Budget 2012**

| | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| Total | 167,180 | 33,442 | 29,820 | ... | 176,296 | 775,000 |
| PR | 5,000 | 5,000 | 5,000 | ... | 5,000 | 60,000 |
| Presentation materials | 1,680 | 7,942 | 4,320 | ... | 10,796 | 49,000 |
| Internet ads | 7,500 | 7,500 | 7,500 | ... | 7,500 | 90,000 |
| Media campaigns | 150,000 | 10,000 | 10,000 | ... | 10,000 | 540,000 |
| Loyal customer program | 2,000 | 2,000 | 2,000 | ... | 2,000 | 24,000 |
| Other marketing costs | 1,000 | 1,000 | 1,000 | ... | 1,000 | 12,000 |

Link costs that are related to some external factors with formulas to these factors. In the example above it is assumed that the customer loyalty program will generate 1,000 new loyal customers each month at a cost to the company of $2 per customer.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

# PROJECTING OTHER COSTS

Other cost projections, e.g. administration costs, HR budget or other selling costs are usually less tricky to forecast than the ones that we have previously defined. These budgets are usually based on historical data and are quite straightforward.

| Happy Retailer, LCC Administration Cost Budget 2021 | | | | | | |
|---|---|---|---|---|---|---|
| | Jan | Feb | Mar | ... | Dec | Total |
| Total | 22,500 | 22,500 | 22,500 | ... | 22,500 | 775,000 |
| Annual Report Audit | 0 | 0 | 0 | ... | 10,000 | 10,000 |
| Accountant & other consultants | 5,000 | 5,000 | 5,000 | ... | 5,000 | 60,000 |
| Office rent | 3,500 | 3,500 | 3,500 | ... | 3,500 | 42,000 |
| Office utilitities | 1,500 | 1,500 | 1,500 | ... | 1,500 | 18,000 |
| Office cleaning | 500 | 500 | 500 | ... | 500 | 6,000 |
| Business trips | 5,000 | 5,000 | 5,000 | ... | 5,000 | 60,000 |
| Stationary goods | 1,000 | 1,000 | 1,000 | ... | 1,000 | 12,000 |
| Business partners (gifts, etc.) | 0 | 0 | 0 | ... | 0 | 0 |
| Commisions for rental agents | 0 | 0 | 0 | ... | 0 | 0 |
| Bank commissions | 1,000 | 1,000 | 1,000 | ... | 1,000 | 12,000 |
| Other administration expenses | 5,000 | 5,000 | 5,000 | ... | 5,000 | 60,000 |

All of the costs shown above are mostly fixed costs. Most costs will be, more or less, equal to the previous year's amounts, except for cases when a clear cost increase formula is provided in the agreement

Take note of the Business trips category above. It is difficult to precisely predict when these costs will occur. My suggestion is to forecast the annual amount that will be allocated for business trips and to divide the total budget equally over 12 months.

The same concept applies to other costs positions as well. Calculate an average amount for the previous year, make corrections for cost inflation and project equally to all the months, except for the cases when the differences are clearly known in advance.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

# OTHER PROJECTIONS

# WORKING CAPITAL

Getting high profits is not enough for the company to be financially successful.

Sometimes an unexpected growth of sales and profits can lead a company to a financial disaster due to inadequate level of working capital financing.

**NET WORKING CAPITAL = CURRENT ASSETS – CURRENT LIABILITIES**

Quite often, during periods of high growth, a company finds itself in a very bad financial situation, especially if its clients are used to long deferred payments.

Therefore, it is crucial to forecast not only profits for the business but also changes in working capital and other balance sheet items so that at the end there is a complete interconnected package of budgets

For the Happy Retailer, I have created three different budget spreadsheets for working capital projections – accounts receivable, inventory and accounts payable. All of them utilize minimum assumptions and are derived from the P&L budget.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

FMWC

# 1.INVENTORY

We now need to forecast inventory movements for each product group, to analyze whether any of the groups have excess inventory and what the inventory refill rates should be for each product group.

The basic formula employed in the inventory budget is as follows:

**Purchases = COGS * Refill Rate + Purchases for New Shops**

**Happy Retailer, LCC Inventory and Purchases 2021**

| | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| Inventory at the beginning of the period | 7,000,000 | 7,000,000 | 7,000,000 | ··· | 9,000,000 | 7,000,000 |
| COGS | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,506 |
| Purchased inventory for existing shops | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,506 |
| Purchased inventory for new shops | | | | | | 2,000,000 |
| Inventory at the end of the period | 7,000,000 | 7,000,000 | 7,000,000 | ··· | 9,000,000 | 9,000,000 |
| *Available funds | 869,560 | 1,015,439 | 1,238,280 | ··· | 2,453,924 | |

| Inventory at the beginning of the month | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| | 7,000,000 | 7,000,000 | 7,000,000 | ··· | 9,000,000 | 7,000,000 |
| Shirts | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,506 |
| Jeans | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,506 |
| Jackets | 869,560 | 1,015,439 | 1,238,280 | ··· | 2,453,924 | 21,686,506 |
| Sportswear | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,506 |
| Swimwear | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,506 |
| Socks | 869,560 | 1,015,439 | 1,238,280 | ··· | 2,453,924 | 21,686,506 |
| Shoes | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,506 |
| Sweaters | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,506 |
| Pants | 869,560 | 1,015,439 | 1,238,280 | ··· | 2,453,924 | 21,686,506 |
| Coats | 869,560 | 1,015,439 | 1,238,280 | ··· | 2,453,924 | 21,686,506 |



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

| | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| COGS | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 21,686,505 |
| Shirts | 223,400 | 195,082 | 195,082 | ··· | 240,919 | 2,451,213 |
| Jeans | 303,897 | 264,716 | 264,716 | ··· | 350,875 | 3,458,705 |
| Jackets | 283,261 | 246,798 | 246,798 | ··· | 318,846 | 3,177,766 |
| Sportswear | 153,451 | 133,880 | 133,880 | ··· | 168,528 | 1.714.639 |
| Swimwear | 177,919 | 154,940 | 154,940 | ··· | 200,278 | 1,995,149 |
| Socks | 88,002 | 76,729 | 76,729 | ··· | 97,724 | 980,289 |
| Shoes | 217,076 | 189,489 | 189,489 | ··· | 223,793 | 2,322,263 |
| Sweaters | 128,287 | 112,024 | 112,024 | ··· | 146,347 | 1,437,344 |
| Pants | 180,952 | 157,578 | 157,578 | ··· | 203,180 | 2,026,198 |
| Coats | 190,580 | 166,166 | 166,166 | ··· | 211,633 | 2,122,398 |

| | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| COGS | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 | 23,686,505 |
| Shirts | 223,400 | 195,082 | 195,082 | ··· | 240,919 | 2,595,934 |
| Jeans | 303,897 | 264,716 | 264,716 | ··· | 350,875 | 3,945,662 |
| Jackets | 283,261 | 246,798 | 246,798 | ··· | 318,846 | 3,373,418 |
| Sportswear | 153,451 | 133,880 | 133,880 | ··· | 168,528 | 1,910,291 |
| Swimwear | 177,919 | 154,940 | 154,940 | ··· | 200,278 | 2,038,627 |
| Socks | 88,002 | 76,729 | 76,729 | ··· | 97,724 | 1,043,644 |
| Shoes | 217,076 | 189,489 | 189,489 | ··· | 223,793 | 2,684,996 |
| Sweaters | 128,287 | 112,024 | 112,024 | ··· | 146,347 | 1,588,276 |
| Pants | 180,952 | 157,578 | 157,578 | ··· | 203,180 | 2,165,329 |
| Coats | 190,580 | 166,166 | 166,166 | ··· | 211,633 | 2,340,329 |

So, after filling in the projected starting levels of inventory at the beginning everything else is calculated automatically.



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

FMWC

# 2.ACCOUNTS PAYABLE AND ACCOUNTS RECEIVABLE

In this case I have provided you with a simple yet effective way of projecting accounts payable and accounts receivable. We operate with the average number of days for covering deferred payments. The calculations are simple. Total sales that occur during the month are divided by 30 days to calculate average daily sales. Then the average daily sales are multiplied by the 3 days of deferred payment.

Summing up the level of debtors from the future sales and the outstanding debt level from historical sales gives the total amount of the accounts receivable that is automatically included into the balance sheet.

| Happy Retailer, LLC Accounts Receivable, 2021 | | | | | | |
|---|---|---|---|---|---|---|
| | | Jan | Feb | Mar | ... | Dec |
| Planned Sales | | 3,590,878 | 3,130,878 | 3,130,878 | ··· | 3,987,545 |
| Deferred Payment, days | | 3 | 3 | 3 | ··· | 3 |
| Current Accounts Receivable | | 359,088 | 313,088 | 313,088 | ··· | 398,754 |
| End-of-year Accounts Receivable | Opening B. | Jan | Feb | Mar | ··· | Dec |
| Balance | 400,000 | 266.667 | 133,333 | 0 | ··· | 0 |

The similar method is used also for the accounts payable, although here the weighted average deferred payment is much longer – 2.5 months or 75 days.

| Happy Retailer, LLC Accounts Payable, 2021 | | | | | | |
|---|---|---|---|---|---|---|
| | | Jan | Feb | Mar | ... | Dec |
| Purchases | | 1,946,826 | 1,697,404 | 1,697,404 | ··· | 2,162,123 |
| Deferred Payment, days | | 75 | 75 | 75 | ··· | 75 |
| Current Accounts Payable | | 1,946,826 | 3,644,229 | 4,368,220 | ··· | 5,115,188 |
| Total | Opening B. | Jan | Feb | Mar | ··· | Dec |
| PR | 5,000,000 | 3,000,000 | 1,000,000 | 0 | ··· | 0 |

These two examples demonstrate a very simple way to project working capital. In your real-life working capital budget, you might want to forecast accounts receivable and accounts payable with a deeper level of detail.



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

# CAPITAL INVESTMENT AND DEPRECIATION SCHEDULES

| Happy Retaller, LLC Capital Expenditure Budget 2021 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan | Feb | Mar | ... | Dec | Total |
| Total | | 0 | 0 | 0 | ... | 0 | 498,920 |
| 10y depreciation | 10y | 0 | 0 | 0 | ... | 0 | 214,286 |
| 5y depreciation | 5y | 0 | 0 | 0 | ... | 0 | 142,858 |
| 3y depreciation | 3y | 0 | 0 | 0 | ... | 0 | 71,428 |
| Intangible asset amortiation | IA | 0 | 0 | 0 | ... | 0 | 0 |
| Non-capitalized Costs | Costs | 0 | 0 | 0 | ... | 0 | 70,348 |
| **Intangible assets amortization forecast** | | | | | | | |
| Total | | 3,000 | 3,000 | 3,000 | ... | 3,000 | 36,000 |
| Amortization of existing int. assets | | 3,000 | 3,000 | 3,000 | ... | 3,000 | 36,000 |
| Amortization of new int. assets | | 0 | 0 | 0 | ... | 0 | 0 |
| **Fixed assets depreciation forecast** | | | | | | | |
| Total | | 167,180 | 33,442 | 29,820 | ... | 176,296 | 105,979 |
| Depreciation of existing fixed assets | | 5,000 | 5,000 | 5,000 | ... | 5,500 | 66,000 |
| Depreciation of new fixed assets | | 0 | 0 | 0 | ... | 6,151 | 39,979 |

| Aventura Mall | Apr | Jan | Feb | ... | Dec | Total | Budget |
|---|---|---|---|---|---|---|---|
| Total | | 0 | 0 | ... | 0 | 250,000 | 250,000 |
| Capital investment | | 0 | 0 | ... | 0 | 214,286 | 214,286 |
| Shop furniture | 10y | 0 | 0 | ... | 0 | 107,143 | 107,143 |
| Construction works | 5y | 0 | 0 | ... | 0 | 71,429 | 71,429 |
| POS Terminals and other IT equipment | 3y | 0 | 0 | ... | 0 | 35,714 | 35,714 |
| Investment 4 | IA | 0 | 0 | ... | 0 | 0 | 0 |
| Investment 5 | IA | 0 | 0 | ... | 0 | 0 | 0 |
| Non-capitalized expences | | 0 | 0 | ... | 0 | 35,714 | 35,714 |
| Personnel training | Costs | 0 | 0 | ... | 0 | 17,857 | 17,857 |
| Initial marketing | Costs | 0 | 0 | ... | 0 | 17,857 | 17,857 |



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

| MillCreek Mall | Sep | Jan | Feb | ... | Dec | Total | Budget |
|---|---|---|---|---|---|---|---|
| Total | | 0 | 0 | ... | 0 | 250,000 | 250,000 |
| Capital investment | | 0 | 0 | ... | 0 | 214,286 | 214,286 |
| Shop furniture | 10y | 0 | 0 | ... | 0 | 107,143 | 107,143 |
| Construction works | 5y | 0 | 0 | ... | 0 | 71,429 | 71,429 |
| POS Terminals and other IT equipment | 3y | 0 | 0 | ... | 0 | 35,714 | 35,714 |
| Investment 4 | IA | 0 | 0 | ... | 0 | 0 | 0 |
| Investment 5 | IA | 0 | 0 | ... | 0 | 0 | 0 |
| Non-capitalized expences | | 0 | 0 | ... | 0 | 35,714 | 35,714 |
| Personnel training | Costs | 0 | 0 | ... | 0 | 17,857 | 17,857 |
| Initial marketing | Costs | 0 | 0 | ... | 0 | 17,857 | 17,857 |

The capital investment budget is created in such a way that when a company wants to do a scenario analysis and to alter store opening dates or even to evaluate what will happen if a store is not opened during the year, the numbers change automatically. The cost estimation is entered into the small table to the right of the main budget and the numbers will then automatically appear at the month of the shop opening.

The depreciation schedule of existing assets is easily projectable – just take a report from your accounting system.

The depreciation schedule of new assets depends on the date of acquisition and the depreciation policy of the company. Then both numbers are added up and the combined value is automatically included into the projected profit and loss statement.



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

This is a short table/summary where you can summarize your capital investment needs for the next year before starting to create the budget.

Remember - anything you plan to buy that cannot be written off immediately to your company's expenses should be included in the capital expenditure budget. If you are not sure whether an item you plan to buy should be treated as a cost or as capital investment it is always a good idea to consult your accountant.

## My company's new capital investment projects for the year _____

**Project Name:** _____

**Starting Month:** _____

| Cost Positions | Depr. | Amount |
|---|---|---|
| Total | | $_____ |
| Capital Investment | | $_____ |
| | | $_____ |
| | ... | ... |
| Non-capitalized expenses | | $_____ |
| | | $_____ |
| | ... | ... |

**Project Name:** _____

**Starting Month:** _____

| Cost Positions | Depr. | Amount |
|---|---|---|
| Total | | $_____ |
| Capital Investment | | $_____ |
| | | $_____ |
| | ... | ... |
| Non-capitalized expenses | | $_____ |
| | | $_____ |
| | ... | ... |

**Project Name:** _____

**Starting Month:** _____

| Cost Positions | Depr. | Amount |
|---|---|---|
| Total | | $_____ |
| Capital Investment | | $_____ |
| | | $_____ |
| | ... | ... |
| Non-capitalized expenses | | $_____ |
| | | $_____ |
| | ... | ... |

**Project Name:** _____

**Starting Month:** _____

| Cost Positions | Depr. | Amount |
|---|---|---|
| Total | | $_____ |
| Capital Investment | | $_____ |
| | | $_____ |
| | ... | ... |
| Non-capitalized expenses | | $_____ |
| | | $_____ |
| | ... | ... |



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# EXTERNAL FINANCING

External financing, whether from banks or owners, affects the profit and loss statement (interest expense) and balance sheet (principal repayment). An external financing budget addresses these impacts. Here's an example for the Happy Retailer, including bank loans, an interest-free line of credit, and car lease agreements.

## Happy Retailer, LIC External Capital Budget 2021

| | Opening B. | Jan | Feb | Mar | ... | Dec | Closing B. |
|---|---|---|---|---|---|---|---|
| Loans | 3,129,560 | -21,400 | -21,400 | -21,400 | ... | -21,400 | 2,872,760 |
| Liabilities | 250,000 | 0 | 0 | 0 | ... | 0 | 250,000 |
| Owner | 250,000 | 0 | 0 | 0 | ... | 0 | 250,000 |
| Owner - new financing | 0 | | | | | | 0 |
| Liabilities | 2,879,560 | -21,400 | -21,400 | -21,400 | ... | -21,400 | 21,622,760 |
| Bank Loan 1 | 1,500,000 | -11,000 | -11,000 | -11,000 | ... | -11,000 | 1,368,000 |
| Bank Loan 2 | 1,300,000 | -9,000 | -9,000 | -9,000 | ... | -9,000 | 1,192,000 |
| ..... | ..... | ..... | ..... | ..... | ... | ..... | ..... |
| Bank Loan 7 | | | | | ... | | 0 |
| Long term lease | 62,760 | -1,400 | -1,400 | -1,400 | ... | -1,400 | 45,960 |
| Short term lease | 16,800 | | | | ... | | 16,800 |



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

## Happy Retailer, LIC External Capital Budget 2021

| | | Opening B. | Jan | Feb | Mar | ... | Dec | Closing B. |
|---|---|---|---|---|---|---|---|---|
| Loans | Base rate | 10,686 | 10,607 | 10,526 | 10,447 | ... | 9,809 | 122,973 |
| Liabilities | | Additional rate | 0 | 0 | 0 | ... | 0 | 0 |
| Owner | | 0.00% | 0 | 0 | 0 | ... | 0 | 0 |
| Owner - new financing | | 0.00% | 0 | 0 | 0 | ... | 0 | 0 |
| Liabilities | Base rate | Additional rate | 10,686 | 10.607 | 10,526 | ... | 9,809 | 122,973 |
| Bank Loan 1 | LIBOR 3m | 2.5% | 5,584 | 5,543 | 5,501 | ... | 5,130 | 64,284 |
| Bank Loan 2 | LIBOR 3m | 2.5% | 4,841 | 4,808 | 4,774 | ... | 4,470 | 55,869 |
| ..... | ..... | 2.5% | ..... | ..... | ..... | ... | ..... | ..... |
| Bank Loan 7 | LIBOR 3m | 2.5% | 0 | 0 | 0 | ... | 0 | 0 |
| Long term lease | LIBOR 3m | 2.5% | 205 | 200 | 195 | ... | 153 | 2,148 |
| Short term lease | LIBOR 3m | 2.5% | 56 | 56 | 56 | ... | 56 | 672 |
| Commission fee | | Commission | 0 | 0 | 0 | ... | 0 | 2.400 |
| Credit line | | 0.3% | | | | ... | | 2.400 |

| | |
|---|---|
| Debt/EBTIDA | 2.400 |
| DSCR | 2.400 |

In the external financing budget, projected principal repayments impact the balance sheet. The lower section of the budget automatically calculates interest based on the changing principal amount, providing a comprehensive approach to projected interest payments.



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

# ADDING EVERYTHING UP

OK, we have now created all the separate parts of the budget and made detailed forecasts for each and every component of the company's financials. The remaining part of the process is technically simple but very creative in a way. Now it's time for adding everything up – we have all the numbers, let's just put them together.

The picture below represents a P&L budget for the Happy Retailer that was automatically created from the cost budgets that we have discussed previously.

**Happy Retailer, LIC Profit and Loss Budget 2021**

| | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| Net sales. | 3,590,878 | 3,130,878 | 3,130,878 | ... | 3,987,544 | 40,000,000 |
| Manufacturing costs | 1,946,826 | 1,697,404 | 1,697,404 | ... | 2,162,122 | 21,686,505 |
| Cost of goods sold | 1,946,826 | 1,697,404 | 1,697,404 | ... | 2,162,122 | 21,686,505 |
| Gross income | 1,644,052 | 1,433,474 | 1,433,474 | ... | 1,825,422 | 18,313,295 |
| Selling expenses | 854,145 | 675,581 | 673,925 | ... | 1,052,910 | 9,782,813 |
| Sales personnel remuneration | 288,907 | 277,894 | 277,895 | ... | 360,248 | 3,791,903 |
| Other personnel expences | 6,247 | 1,067 | 1,107 | ... | 3,347 | 27,180 |
| Rent and other shop expenses | 347,821 | 320,063 | 320,063 | ... | 463,228 | 4,620,944 |
| Marketing costs | 167,180 | 33,442 | 29,820 | ... | 176,296 | 775,000 |
| Amortization of intangible assets | 3,000 | 3,000 | 3,000 | ... | 3,000 | 36,000 |
| Depreciation of fixed assets | 5,500 | 5,500 | 5,500 | ... | 11,651 | 105,980 |
| Other selling costs | 35,490 | 34,615 | 36,540 | ... | 35,140 | 427,808 |



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

| | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| Administrative expenses | 137,292 | 137,292 | 137,292 | ··· | 147,292 | 214,286 |
| Administration remuneration | 114,792 | 114,792 | 114,792 | ··· | 114,792 | 214,286 |
| Development costs | 0 | 0 | 0 | ··· | 0 | 142,858 |
| Other administrations costs | 22,500 | 22,500 | 22,500 | ··· | 32,500 | 71,428 |
| Other operating revenues | 0 | 0 | 0 | ··· | 0 | 0 |
| Other operating expenses | 8,750 | 8,750 | 8,750 | ··· | 12,250 | 70,348 |
| Interest income | 0 | 0 | 0 | ··· | 0 | 214,286 |
| Interest expenses | 10,686 | 10,607 | 10,526 | ··· | 9,809 | 142,858 |
| Income before extraordinary item: | 633,179 | 601,244 | 599.481 | ··· | 603,161 | 6,557,376 |
| Non recurring income | 0 | 0 | 0 | ··· | 0 | 0 |
| Non recumng expenses | 0 | 0 | 0 | ··· | 0 | 0 |
| Profit before taxes | 633,179 | 601,244 | 599,481 | ··· | 603,161 | 6,557,376 |
| Federal Income Tax | 215,281 | 204,423 | 203,824 | ··· | 205,075 | 2,229,508 |
| State Income Tax | 31,659 | 30,062 | 29,974 | ··· | 30,158 | 327,869 |
| Other taxes | 0 | 0 | 0 | ··· | 0 | 0 |
| Net income | 386,239 | 366,759 | 365,683 | ··· | 367,928 | 4,000,000 |
| *EBITDA | 652,365 | 620,351 | 618,507 | ··· | 627,621 | 6,824,724 |
| **EBIT | 643,865 | 611,851 | 610,007 | ··· | 612,970 | 6,682,744 |



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

Now the profit and loss budget is ready for the consolidation process, however, we still need to include the balance sheet and the cashflow budget in our calculations.

To forecast the balance sheet, start by inputting the starting values based on the most current available balance sheet. Link subsequent months to projections made in the working capital, CAPEX, and financing budgets. Some balance sheet positions may require manual projection, such as reserves.

Retained earnings are linked to the P&L budget, while the cash balance is calculated in the cashflow budget and connected back to the balance sheet. These interconnections ensure automatic reflection of changes across the statements.

**Happy Retailer, LLC Balance Sheet 2021**

| Assets | Dec | Jan | Feb | Mar | ... | Nov | Dec |
|---|---|---|---|---|---|---|---|
| Cash | 869,560 | 1,015,439 | 1,238,280 | 1,448,507 | ... | 2,453,924 | 2,472,462 |
| Marketable securities | 0 | 0 | 0 | 0 | ... | 0 | 142,858 |
| Accounts receivable | 400,000 | 625,755 | 446,421 | 313,088 | ... | 363,088 | 398,754 |
| Sales tax overpayment | 0 | 0 | 0 | 0 | ... | 0 | 0 |
| Inventory | 7,000,000 | 7,000,000 | 7,000,000 | 7,000,000 | ... | 9,000,000 | 9,000,000 |
| Total current assets | 8,269,560 | 8,750 | 8,750 | 8,750 | ... | 12,250 | 70,348 |
| Long-term financial investment, | 1,400,000 | 1,400,000 | 1,400,000 | 1,400,000 | ... | 1,400,000 | 1,400,000 |
| Tangible assets | 2,000,000 | 1,994,500 | 1,989,000 | 1,983,500 | ... | 2,334,242 | 2,322,591 |
| Intangible assets | 250,000 | 247,000 | 244,000 | 241,000 | ... | 217,000 | 214,000 |
| Total fixed assets | 3,650,000 | 3,641,500 | 3,633,000 | 3,624,500 | ... | 3,951,242 | 3,936,591 |
| Total fixed assets | 11,919,560 | 12,282,694 | 12,317,701 | 12,386,095 | ... | 15,768,254 | 15,807,808 |



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

## Happy Retailer, LLC Balance Sheet 2021

| Equity and liabilities | Dec | Jan | Feb | Mar | ... | Nov | Dec |
|---|---|---|---|---|---|---|---|
| Short-term loans | 240,000 | 114,792 | 114,792 | 114,792 | ··· | 240,000 | 240,000 |
| Short-term leasing | 16,800 | 0 | 0 | 0 | ··· | 16,800 | 16,800 |
| Accounts payable | 5,000,000 | 22,500 | 22,500 | 22,500 | ··· | 5,421,775 | 5,115,188 |
| Sales tax debt | 40,000 | 0 | 0 | 0 | ··· | 90,246 | 89,860 |
| Other tax liabilities | 20,000 | 8,750 | 8,750 | 8,750 | ··· | 0 | 0 |
| Current liabilities | 5,316,8001 | 8,750 | 8,750 | 8,750 | ··· | 5,768,821 | 5,461848 |
| Long-term loans | 2,560,000 | 22,500 | 22,500 | 22,500 | ··· | 2,340,000 | 2,320,000 |
| Long-term leasing | 62,760 | 0 | 0 | 0 | ··· | 47,360 | 45,960 |
| Owners' loans | 250,000 | 8,750 | 8,750 | 8,750 | ··· | 250,000 | 250,000 |
| Long-term liablities | 2,872,760 | 8,750 | 8,750 | 8,750 | ··· | 2,637,360 | 2,615,960 |
| Total liabilities | 8,189,560 | 8,750 | 8,750 | 8,750 | ··· | 8,406,182 | 8,077.808 |
| Provisions | 0 | 0 | 0 | 0 | ··· | 0 | 0 |
| Share Capital | 1,200,000 | 1,200,000 | 1,200,000 | 1,200,000 | ··· | 1,200,000 | 1,200,000 |
| Reserves | 30,000 | 30,000 | 30,000 | 30,000 | ··· | 30,000 | 30,000 |
| Retained Earnings from prevous years | 2,500,000 | 2,500,000 | 2,500,000 | 2,500,000 | ··· | 2,500,000 | 2,500,000 |
| Current year's Net Income | 0 | 386,239 | 752,999 | 1,118,682 | ··· | 3,632,072 | 4,000,000 |
| Retained earnings | 2,500,000 | 2,886,239 | 3,252,999 | 3,618,682 | ··· | 6,132,072 | 6,500,000 |
| Total equity | 3,730,000\| | 4,116,239 | 4,482,999 | 4,848,682 | ··· | 7,362,072 | 7,730,000 |
| Total equity and liabilities | 11,919,560 | 12,282,694 | 12,317,701 | 12,386,095 | ··· | 15,768,254 | 15,807,808 |

| Control | | | | | | | |
|---|---|---|---|---|---|---|---|
| Are Assets and Liabilities equal? | TRUE | TRUE | TRUE | TRUE | ··· | TRUE | TRUE |
| What is the difference? | 0 | 0 | 0 | 0 | ··· | 0 | 0 |
| What is the monthly growth of the difference? | 0 | 0 | 0 | 0 | ··· | 0 | 0 |

Note the small table below. This is a very helpful instrument to include in your budget since it helps to check whether the P&L budget, the balance sheet and the cashflow budget were linked together correctly.



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

Now it is time to evaluate the cashflow statement derived from the P&L and balance sheet.

To make changes to the cashflow budget, update the relevant budgets from which it is derived. For example, if capital investments cannot be funded in April, adjust the capital investment budget rather than the cash-flow budget directly.

**Company name Cash Flow Budget 2021**

| Cash flow statement | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| Cash and cash equivalents at the beginning of the period | 869,560 | 1,015,439 | 1,238,280 | ... | 2,453,924 | 869,560 |
| Cash provided by operations | | | | | | |
| Net income (loss) | 386,239 | 366,759 | 365,684 | ... | 367,928 | 4,000,000 |
| Adjustments | 19,186 | 19,106 | 19,026 | ... | 24,460 | 267,349 |
| + Depreciation and amortization | 8,500 | 8,500 | 8,500 | ... | 14,651 | 141,979 |
| + Increase in provisions | 0 | 0 | 0 | ... | 0 | 0 |
| - Interest income | 0 | 0 | 0 | ... | 0 | 0 |
| + Interest expense | 10,686 | 10,606 | 10.526 | ... | 9,809 | 125,368 |
| Decrease in operating assets | | | | | | |
| - Accounts receivable | -225.754 | 179,333 | 133,333 | ... | -35,667 | 1,246 |
| - Inventories | 0 | 0 | 0 | ... | 0 | -1,000,000 |
| Increase in operating liablities | | | | | | |
| + Accounts payable and tax debt | -1.706 | 1,697,404 | 1,697,404 | ... | -306,974 | 145,046 |
| Cash provided by operations | 177,965 | 1,697,404 | 1,697,404 | ... | 49,747 | 4,267,349 |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

| Cash flow statement | Jan | Feb | Mar | ... | Dec | Total |
|---|---|---|---|---|---|---|
| **Investment activities** | | | | | | |
| Financial investments | 0 | 0 | 0 | ... | 0 | 0 |
| Purchases of property, plant, equipment and intangible assets | 0 | 0 | 0 | ... | 0 | -428,572 |
| Investments in short-term financial instrumens | 0 | 0 | 0 | ... | 0 | 0 |
| Interest income | 0 | 0 | 0 | ... | 0 | 0 |
| Cash used for investment activities | 0 | 0 | 0 | ... | 0 | -428,572 |
| **Financing activities** | | | | | | |
| Net increase (decrease) in bank financing | -21,400 | -21,400 | -21,400 | ... | -21,400 | -256,800 |
| Interest expense | -10,686 | -10,606 | -10,526 | ... | -9,809 | -125,368 |
| Net increase (decrease) in owners' financing | 0 | 0 | 0 | ... | 0 | 0 |
| Dividend payment | 0 | 0 | 0 | ... | 0 | 0 |
| Increase (decrease) in reserves | 0 | 0 | 0 | ... | 0 | 0 |
| Increase (decrease in share capital | 0 | 0 | 0 | ... | 0 | 0 |
| Cost of goods sold | -32,086 | -32,006 | -31,926 | ... | -31,209 | -382,168 |
| Cost of goods sold | 145,879 | 222,841 | 210,227 | ... | 18,538 | 1,602,902 |
| Cost of goods sold | 1,015,439 | 1,238,280 | 1,448,507 | ... | 2,472,462 | 2,472,462 |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn
and be the first to read the next chapter!

# FINANCIAL PLANNING

## FOR SMEs

## Chapter 6 - Consolidation

Author: Andrew Grigolyunovich, CFA, MFM, FMVA

www.fmworldcup.com

FMWC

# CONSOLIDATION

While the planning stage of the budgeting process is the most time-consuming, the consolidation process is by far the most creative.

During the consolidation process, you must:

1. Combine the revenues and costs you projected
2. Put them together
3. Compare the results with the goals that were set at the beginning of the process.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

It is quite likely that the first result that you get looks like the diagram below.

The revenues and the costs just don't go together and don't match the goals.

The moment you recognize this, the consolidation process begins.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

The goal of the consolidation is to synchronize revenues and costs with the goals that are set for the company – just like in the diagram below.

The process is simple, and the logic is usually quite clear – increase planned revenues and lower planned costs.

For smaller companies, creating the budget internally and presenting it to employees is quite easy. However, for larger companies, the process becomes more complex as employees need to be actively involved.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

Employees' forecasts may be flawed due to their vested interest in fulfilling them. In larger companies, this phenomenon, known as **sandbagging**, can impact budget accuracy.

## There are several ways to deal with sandbagging:

1. Be aware of it and make proactive adjustments for it.

2. Create a motivation system for employees independent of the budget. For example, for sales personnel the budget sales plan would have nothing to do with monthly sales plans. Their monthly plans would instead be determined by a clearly pre- defined formula.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# FINANCIAL PLANNING

## FOR SMEs

## Chapter 7 - Evaluation

Author: Andrew Grigolyunovich, CFA, MFM, FMVA

www.fmworldcup.com

# EVALUATION

The next step in the budgeting process is evaluation. It may be a formal evaluation by the board of directors or it might be just another look at the completed budget by the owner in a sole proprietorship.

During the evaluation process, it is recommended that you use several tools in order to better understand the forecasted numbers and the assumptions behind them.

Still, even the advocates of budgeting software admit that no software possess-es as much flexibility as Microsoft Excel. Moreover, users can create financial plan-ning models according to their needs.

www.fmworldcup.com



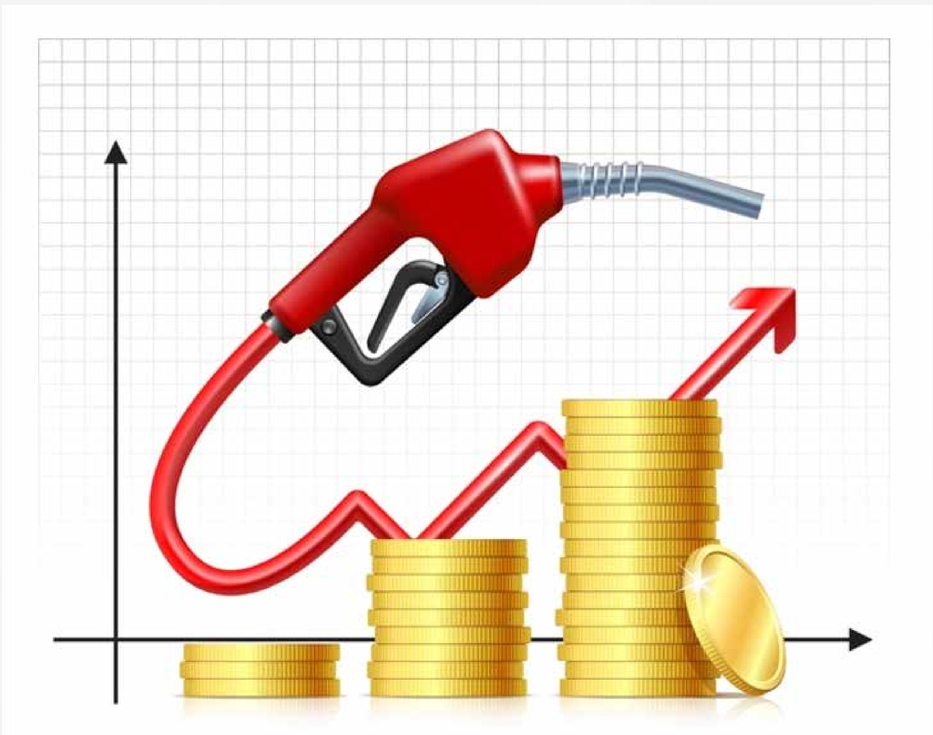
Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

# SENSITIVITY ANALYSIS

## CHECKING THE MOST CRITICAL ASSUMPTIONS

Budget numbers are forecasts based on assumptions. Predicting the future involves risks, and mistakes can range from costly to negligible.



For example, forecasting oil prices is challenging due to various influencing factors, leading to errors in fuel price estimates. These errors have more significant consequences for transportation companies than financial services firms.

It is important to identify the assumptions that have the greatest impact on the company's results, double-check them, and possibly leave some reserve for the downside risk as well. Sensitivity analysis is the best way to do that.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

# SENSITIVITY ANALYSIS

## CHECKING THE MOST CRITICAL ASSUMPTIONS

Sensitivity analysis is straightforward: fix all budget numbers and vary assumptions one-by-one to identify critical factors impacting profit the most. Accurate forecasting of these assumptions is crucial as errors here have the greatest cost.

Let's take Happy Retailer as an example. A 10% decrease in sales reduced net income by 24.5%, while a 10% decrease in markups resulted in a 15.8% profit reduction. However, a 10% increase in the base interest rate caused only a 0.08% profit decline.

**Sensitivity analysis helps identify critical factors affecting profits.**

It is very clear that the sales amounts are the most important assumption for the Happy Retailer. Markups are an important assumption as well, however, the cost of error is less here. Bank interest rates are not important at all – the cost of error here is very low.

**Keep doing these analyses to other assumptions in your budget in order to understand their impact on the final results of your company.**

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# RATIO ANALYSIS

During the review stage it is also advised to have a look at the projected financial ratios for your company.

Financial ratio analysis is actually a separate topic. There is a great deal of literature available regarding financial ratios.

For instance, a very comprehensive collection of articles about financial ratio analysis are published in Investopedia and are available at:

http://www.investopedia.com/university/ratios/#axzz1tzR0GZg6.

Still, keep in mind that it is a good idea to compare the ratios you have forecast for your company to the widely accepted norms or to the ratios of your competitors.

If your goals are satisfied with the forecast numbers but some of the financial ratios are lagging behind the industry norm, there might be a problem with the goals not being ambitious enough.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# The most important financial ratios to look at:

| Ratio | Formula | Description |
|---|---|---|
| Net Margin | (Net Income / Total Revenue) x 100% | Measures the percentage of each dollar of revenue that results in net profit after deducting all expenses. It indicates the company's efficiency in converting sales into profits. |
| Equity to Assets Ratio | Total Equity / Total Assets | Measures the proportion of a company's assets financed by shareholders' equity. It helps assess the company's financial leverage and risk exposure. |
| Debt to EBITDA Ratio | Total Debt / EBITDA | Evaluates a company's ability to pay off its debt using its operating earnings. Lower ratios indicate better debt-paying capacity. |
| Sales Growth | ((Current Period Sales - Previous Period Sales) / Previous Period Sales) x 100% | Measures the percentage change in a company's sales between two periods, usually year-over-year. It indicates the company's performance and market expansion. |
| Cash Conversion Cycle | Days Inventory Outstanding + Days Sales Outstanding - Days Payables Outstanding | Evaluates the time it takes for a company to convert its investments in inventory and accounts receivable into cash. It shows how efficiently the company manages its working capital. A shorter cycle is generally favorable. |

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

FMWC

# SCENARIO ANALYSIS

During budgeting, companies face crucial decisions like investing in new equipment, choosing between labor and machines, and prioritizing growth or profit. Developing and comparing scenarios helps estimate performance under different assumptions.

Scenario analysis for a stable business involves creating assumptions for poor, average, and healthy economic states. Assessing how the company copes with challenges in each scenario helps identify necessary steps for mitigation. For instance, cutting costs during a sales drop in a poor economy or financing expansion during a sales increase in a healthy economy.

For effective scenario analysis, I highly recommend using a flexible financial model that automatically recalculates all numbers when assumptions change. You can create your model or explore professional templates from www.cfotemplates.com for convenience.

www.fmworldcup.com



Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# WANT TO LEARN MORE?

**Sign up for the training camp in Las Vegas!**

THE ACTIVE CELL

## LEARN FROM CHAMPIONS!

- Excel Training Camp
- Financial Modeling Training Camp
- Microsoft Excel World Championship 2023 Finals

**Las Vegas | December 7-9, 2023**

Learn more

www.fmworldcup.com/the-active-cell/

Follow Financial Modeling World Cup on LinkedIn and be the first to read the next chapter!

# ABOUT THE AUTHOR

## Andrew Grigolyunovich, CFA, MFM, FMVA

Andrew Grigolyunovich is the founder & CEO of AG Capital CFO Services, a financial consulting company providing outsourced CFO services for small and medium businesses. He is a renowned figure in the financial modeling industry, being the founder & CEO of the Financial Modeling World Cup sponsored by Microsoft. Andrew has been awarded the Master Financial Modeler designation, the highest possible, by the Financial Modeling Institute (FMI).

At the age of 42, Andrew has accumulated 20+ years of top management experience in finance and business. He obtained his degree from the Stockholm School of Economics in Riga at 20 and began his career as a financial analyst in a mobile phone retailer. Shortly after, the company merged with its competitor to form Latvia's largest mobile phone retail company, and Andrew was appointed CFO at the age of 21, kick-starting his career in finance. Later, at 26, Andrew became CEO and CFO of Grenardi Group, a leading jewelry retailer in the Baltic region. Under his leadership, the company expanded regionally, but the 2008 financial crisis led to restructuring.

This was the start of a great journey as Andrew founded AG Capital Group and later the Financial Modeling World Cup. Over the years the company has grown to an agency specializing in outsourced CFO and financial modeling services, serving 300+ clients across 20+ countries worldwide.

Andrew wrote the first edition of this book back in 2012. In 2023, our team at FMWC has re-designed it to bring in less text and more pictures, charts, and visual content into the book's 3rd edition. Note that this is only an extract of the full book, more chapters are coming out on our LinkedIn page soon! Follow us and don't miss out!

*Andrew Grigolyunovich*

©2023 Andrew Grigolyunovich
All Rights Reserved