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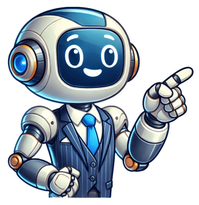

Financial models are essential tools that help businesses and investors make informed decisions by providing insights into an organization's financial health and potential risks. This comprehensive guide will cover various types of financial models, their uses, and key components to help you better understand how they contribute to strategic decision-making.What is Financial Modeling?Financial modeling is the process of creating a mathematical representation of a company's financial situation, typically using historical data, assumptions, and projections. These models help businesses make data-driven decisions, evaluate investment opportunities, and plan for future growth. The key components of a financial model include income statements, balance sheets, cash flow statements, and key financial ratios.Purpose of making Financial ModelsMaking Company decisions – Management, treasury, strategy teams of the company use financial models to make future decisions for the company.Pricing securities – If a company wants to issue fresh securities or debt, they use financial models to price them.Corporate transactions – Investment banking is closely related to mergers, acquisitions, private equity and hence analyst spend immense time building financial models to help with these decisions.Investment decisions – Financial modelling can help in evaluating and forecasting outputs/returns of investments of a company.Also Read: How to Make a Financial Model – Step by Step GuideTypes of Financial ModelsThere are various types of financial models based on the need for the models or the purpose that they would serve but listed below are the most commonly used and well-known types of financial models –Three Statement ModelThe Three Statement Model is a financial model that combines a company's income statement, balance sheet, and cash flow statement into a single, integrated framework. This model helps you analyze a company's financial performance, understand the relationships between the three statements, and evaluate how changes in one statement may impact the others. It's a crucial tool for financial analysis, valuation, and decision-making in various contexts, such as investing, budgeting, and forecasting.Example / Use caseLet's say you're an analyst who wants to create a Three Statement Model for Company Z to assess its financial performance and make investment decisions. To do this, you would follow these steps:Step 1: Gather historical financial statements – Collect Company Z's historical financial statements, including the income statement, balance sheet, and cash flow statement. This information will serve as the basis for your model.Step 2: Format and link the financial statements – Arrange the financial statements in a consistent format and link them together, so changes in one statement will automatically flow through to the others. This involves connecting line items like net income, changes in working capital, and changes in long-term assets and liabilities.For example, net income from the income statement should flow into the cash flow statement and be added to retained earnings on the balance sheet.Step 3: Analyze historical financial performance – Examine the historical financial statements to identify trends, assess the company's financial health, and understand the drivers of its performance. This may include calculating financial ratios, analyzing growth rates, and evaluating profitability and liquidity.Step 4: Develop assumptions for future performance – Based on your analysis of historical performance and any other relevant information (e.g., industry trends, economic conditions), develop assumptions for the company's future financial performance. This may include assumptions about revenue growth, expense trends, and changes in working capital.Step 5: Forecast future financial statements – Using your assumptions, project the company's future income statement, balance sheet, and cash flow statement. The forecast should be consistent with your assumptions and reflect the relationships between the three financial statements.Step 6: Conduct sensitivity and scenario analysis – Test the impact of different assumptions and scenarios on the company's projected financial performance. This can help you understand the potential risks and opportunities associated with your investment decision.For example, you might analyze the impact of a higher or lower revenue growth rate, or the effect of changes in the company's cost structure.By following these steps, you can use a Three Statement Model to analyze a company's financial performance, understand the relationships between the financial statements, and evaluate the potential impact of changes in key assumptions. This information can help you make informed investment decisions and assess the company's financial health and prospects.(The picture shows historical data and forecasted figures in all three statements – Income, Balance sheets and cash flow statements)Discounted Cash Flow (DCF) ModelImagine you're considering investing in a business, and you want to know how much that investment is worth today. The Discounted Cash Flow (DCF) model helps you do that by estimating the future cash flows the business is expected to generate and then "discounting" those cash flows back to their present value. In simpler terms, it tells you how much future money is worth today, considering that money's value decreases over time (due to factors like inflation and risk).Example / Use caseLet's say you're thinking about investing in a small bakery. To determine its value, you would follow these steps using the DCF model:Step 1: Forecast cash flows – Estimate the bakery's future cash flows for the next few years. This could be based on factors like historical sales, growth projections, and the local market.For example, you might estimate the following cash flows:Year 1: $20,000Year 2: $25,000Year 3: $30,000Year 4: $35,000Year 5: $40,000Step 2: Determine the discount rate – Calculate the required rate of return based on the risk associated with the investment. This rate reflects the minimum return you would accept to invest in the bakery instead of a less risky alternative, like a government bond.For example, let's say you decide on a discount rate of 10%.Step 3: Calculate the present value – Discount future cash flows to their present value using the discount rate. This involves dividing each cash flow by (1 + discount rate) raised to the power of the number of years into the future.For example, the present value of the Year 1 cash flow would be: $20,000 / (1 + 0.10)^1 = $18,182You would repeat this calculation for each year's cash flow and sum the present values to arrive at the total present value of the future cash flows.Components of Financial ModelingStep 4: Estimate the terminal value – Calculate the value of cash flows beyond the forecast period (Years 1-5). This is often done using a "terminal growth rate," which is a constant rate at which cash flows are assumed to grow indefinitely.For example, let's say you assume a terminal growth rate of 2%. You would calculate the terminal value as follows: Terminal Value = Year 5 cash flow * (1 + terminal growth rate) / (discount rate – terminal growth rate) = $40,000 * (1 + 0.02) / (0.10 – 0.02) = $510,000Then, you would discount the terminal value back to its present value and add it to the total present value of the future cash flows to get the overall value of the bakery.(In this picture below, we can see a very basic example of the DCF model, the cash flows of years 1 to 5 are discounted by a discount rate to its present value)Comparable Company Analysis (CCA) ModelImagine you want to buy a house, and you're trying to determine how much it's worth. One common approach is to look at similar houses in the neighborhood and compare their prices. Comparable Company Analysis (CCA) works in a similar way, but for businesses. It helps you estimate the value of a company by comparing it to other similar companies in the same industry. This method is based on the idea that companies with similar characteristics should have similar valuations.Example / Use caseLet's say you're considering investing in a small software company and want to estimate its value using the CCA model. To do this, you would follow these steps:Step 1: Identify comparable companies – Find other software companies that are similar to the one you're interested in, considering factors like size, growth, and profitability. Ideally, you should find publicly traded companies since their financial information is readily available.For example, you might select three other small software companies as comparables.Step 2: Choose valuation multiples – Select financial ratios, called valuation multiples, that will help you compare the companies. Commonly used multiples in CCA include Price-to-Earnings (P/E) ratio, Enterprise Value-to-EBITDA (EV/EBITDA), and Price-to-Sales (P/S) ratio. These multiples help you compare the value of companies relative to their earnings, cash flow, or sales.For example, let's say you decide to use the P/E ratio.Step 3: Calculate the multiples for the comparable companies – Compute the valuation multiples for each comparable company using their financial data. For example, the P/E ratio is calculated by dividing the company's stock price by its earnings per share (EPS).Let's say the three comparable software companies have P/E ratios of 15, 20, and 25.Step 4: Determine the target company's valuation multiple – Calculate the average or median valuation multiple of the comparable companies. This will be used as a benchmark for valuing the target software company.In our example, the average P/E ratio of the comparable companies is (15 + 20 + 25) / 3 = 20.Step 5: Estimate the target company's value – Multiply the target company's financial metric (in our case, earnings per share) by the benchmark valuation multiple to estimate its value.For example, if the target software company has an EPS of $2, its estimated value using the CCA model would be: Value = P/E ratio * EPS = 20 * $2 = $40 per shareBy following these steps, you can use the CCA model to estimate the value of a company based on the valuations of similar companies in its industry. Popular Course in this category Financial Modeling & Valuations Course 100% Placement Assistance | 50+ Case Studies | Most extensive curriculum Precedent Transaction Analysis (PTA) ModelWhen you're trying to figure out how much you should pay for something, it's often helpful to look at the prices that others have paid for similar items in the past. Precedent Transaction Analysis (PTA) applies this concept to valuing businesses by examining the prices paid in previous transactions involving similar companies. By analyzing these past deals, you can get a sense of the fair value for the company you're interested in.Example / Use caseSuppose you're considering acquiring a small restaurant and want to estimate its value using the PTA model. To do this, you would follow these steps:Step 1: Identify precedent transactions – Find past deals involving the acquisition of similar restaurants, considering factors like size, location, and type of cuisine. These transactions will serve as a basis for comparison.For example, you might find three precedent transactions involving the acquisition of small restaurants in your area.Step 2: Choose valuation multiples – Select financial ratios, called valuation multiples, to compare the transactions. Common multiples used in PTA include Enterprise Value-to-Revenue (EV/Revenue), Enterprise Value-to-EBITDA (EV/EBITDA), and Price-to-Earnings (P/E) ratio. These multiples help you compare the value of companies relative to their sales, cash flow, or earnings.For example, let's say you decide to use the EV/Revenue multiple.Step 3: Calculate the multiples for the precedent transactions – Compute the valuation multiples for each precedent transaction using the deal information. For instance, the EV/Revenue multiple is calculated by dividing the transaction's enterprise value (purchase price plus debt) by the target company's revenue.Let's say the three precedent transactions have EV/Revenue multiples of 0.8, 1.0, and 1.2.Step 4: Determine the benchmark valuation multiple – Calculate the average or median valuation multiple of the precedent transactions. This will be used as a benchmark for valuing the target restaurant.In our example, the average EV/Revenue multiple of the precedent transactions is (0.8 + 1.0 + 1.2) / 3 = 1.0.Step 5: Estimate the target restaurant's value – Multiply the target restaurant's financial metric (in our case, revenue) by the benchmark valuation multiple to estimate its value.For example, if the target restaurant has annual revenue of $500,000, its estimated value using the PTA model would be: Value = EV/Revenue multiple * Revenue = 1.0 * $500,000 = $500,000By following these steps, you can use the PTA model to estimate the value of a company based on the valuations of similar companies in previous transactions.Leveraged Buyout (LBO) ModelImagine you want to buy a house, but you don't have enough money to pay for it in cash. Instead, you take out a mortgage to cover most of the cost and make a down payment with your own money. This is similar to how a Leveraged Buyout (LBO) works in the business world. In an LBO, an investor (usually a private equity firm) acquires a company using a combination of their own funds (equity) and borrowed money (debt). The LBO model is used to analyze the potential returns from such an investment and to determine how much the investor can afford to pay for the target company while still achieving their desired rate of return.Example / Use caseLet's say you're a private equity firm considering an LBO of a small manufacturing company. To estimate the potential returns and maximum purchase price using the LBO model, you would follow these steps:Step 1: Forecast the target company's cash flows – Estimate the manufacturing company's future cash flows for the investment period (e.g., five years). This could be based on factors like historical financial performance, growth projections, and industry trends.Step 2: Determine the financing structure – Decide on the mix of debt and equity you'll use to finance the LBO. This will depend on factors like the target company's cash flow, the availability of financing, and your desired level of risk.For example, let's say you plan to finance the LBO with 70% debt and 30% equity.Step 3: Estimate the debt repayment schedule – Based on the financing structure, calculate the annual debt repayments the company will need to make. The borrowed money is usually paid back using the target company's cash flows.Step 4: Calculate the exit value – Estimate the value of the target company at the end of the investment period. This is often done by applying a valuation multiple (e.g., EV/EBITDA) to the company's projected financial metrics.For example, let's say you expect the company's EBITDA to be $10 million at the end of Year 5, and you apply an exit multiple of 8x. The exit value would be $80 million.Step 5: Calculate the potential return on investment (ROI) – Determine the potential ROI by considering the initial investment, the debt repayment, and the exit value. This will help you evaluate the attractiveness of the LBO opportunity.For example, let's say the initial investment (equity) is $15 million, and at the end of Year 5, the company has repaid all its debt. The potential return would be: ROI = (Exit Value – Initial Investment) / Initial Investment = ($80 million – $15 million) / $15 million = 433%Step 6: Assess the maximum purchase price – Based on your desired rate of return, calculate the maximum purchase price you can afford to pay for the target company while still achieving that return.By following these steps, you can use the LBO model to evaluate the potential returns from a leveraged buyout and determine the maximum price you can afford to pay for the target company.Mergers and Acquisitions (M&A) ModelIn the business world, companies sometimes decide to join forces by merging or acquiring one another to create a stronger, more competitive entity. A Mergers and Acquisitions (M&A) model helps you analyze the financial implications of such a deal by estimating the combined value of the two companies and determining whether the deal would create value for the shareholders. This model is used to ensure that the transaction makes financial sense and to identify any potential synergies or cost savings that could result from the deal.Example / Use caseLet's say you're the CFO of Company A, and you're considering acquiring Company B. To analyze the potential financial impact of this acquisition using the M&A model, you would follow these steps:Step 1: Gather financial data – Collect the financial data for both companies, including balance sheets, income statements, and cash flow statements. You'll need this information to create pro forma financial statements, which show the combined financial performance of the two companies as if they were already merged.Step 2: Estimate synergies and cost savings – Identify potential synergies and cost savings that could result from the acquisition. Synergies are benefits that arise when two companies combine, such as increased market share, improved operational efficiency, or reduced costs.For example, you might identify the following synergies:Reduction in duplicate administrative functionsStreamlined supply chain managementIncreased bargaining power with suppliersStep 3: Create pro forma financial statements – Combine the financial data of both companies and adjust for any synergies and cost savings to create pro forma financial statements. This will give you an idea of the combined company's financial performance.Step 4: Determine the purchase price and deal structure – Decide on the price you're willing to pay for Company B and the structure of the deal (e.g., cash, stock, or a combination of both). This will depend on factors like the target company's financial performance, growth prospects, and the potential synergies.Step 5: Calculate the accretion/dilution – Determine whether the acquisition would be accretive or dilutive to Company A's earnings per share (EPS). Accretive deals increase EPS, while dilutive deals decrease EPS. This calculation helps you understand the impact of the acquisition on your shareholders' value.For example, let's say Company A's EPS before the acquisition is $2.00, and the pro forma EPS after the acquisition is $2.20. The deal would be accretive, as the combined EPS is higher than Company A's standalone EPS.Step 6: Evaluate the deal – Based on the pro forma financial statements and the accretion/dilution analysis, assess whether the acquisition would create value for Company A's shareholders and if it aligns with the company's strategic goals.By following these steps, you can use the M&A model to analyze the financial implications of a merger or acquisition and determine whether the deal makes financial sense for both companies involved.Budgeting and Forecasting ModelA budget is a financial plan that outlines a company's expected revenues, expenses, and cash flows over a specific period, usually a year. Budgeting helps companies allocate resources, control spending, and track financial performance. Forecasting, on the other hand, involves predicting a company's future financial performance based on historical data, market trends, and management's expectations. A Budgeting and Forecasting Model combines these two processes to help companies create a comprehensive financial plan, set performance targets, and monitor progress throughout the year.Example / Use caseLet's say you're a small business owner who wants to create a budget and forecast for the upcoming year using a Budgeting and Forecasting Model. To do this, you would follow these steps:Step 1: Gather historical financial data – Collect your company's historical financial data, including revenues, expenses, and cash flows. This information will serve as the basis for your budget and forecast.Step 2: Analyze trends and external factors – Identify any trends in your company's financial performance, as well as external factors that may impact future results, such as changes in the industry, economic conditions, or new regulations.Step 3: Set revenue and expense assumptions – Based on your analysis, set assumptions for future revenues and expenses. These assumptions could include factors like expected sales growth, changes in the cost of goods sold, and anticipated operating expenses.For example, you might assume that your sales will grow by 10% next year, your cost of goods sold will remain at 60% of sales, and your operating expenses will increase by 5%.Step 4: Create the budget – Using your revenue and expense assumptions, create a detailed budget for the upcoming year. This should include line items for all expected income and expenditures, along with a projected cash flow statement.Step 5: Develop the forecast – Create a forecast for the upcoming year based on your budget and any additional information or expectations not captured in the budget. The forecast should be updated regularly (e.g., monthly or quarterly) to reflect actual performance and any changes in assumptions or market conditions.Step 6: Monitor and adjust – Throughout the year, compare your actual financial performance to your budget and forecast. Identify any variances and analyze the reasons for these differences. If necessary, make adjustments to your budget or forecast to ensure you remain on track to achieve your financial goals.By following these steps, you can use a Budgeting and Forecasting Model to create a comprehensive financial plan for your business, set performance targets, and monitor progress throughout the year. This process helps you allocate resources efficiently, control spending, and make informed decisions about your company's future growth and profitability.(In the picture we can see historical financial figures for the month of February and based on those projections being made for the entire year for the company)Factors to consider when selecting a financial modelPurpose and objectives: Consider the specific goals and context of the analysis.Industry and company characteristics: Assess the nature of the business and its industry dynamics.Available data and information: Evaluate the quality and quantity of financial data available.Complexity and resources: Balance the complexity of the model with the time and resources required to prepare and maintain it.Tips for enhancing financial modeling expertiseMaster spreadsheet functions and shortcuts: Improve your efficiency and effectiveness in financial modeling by mastering spreadsheet functions and shortcuts.Develop a logical and structured approach: Organize your models in a clear and logical manner to enhance their readability and usability.Validate and cross-check your models: Regularly review and validate your models for accuracy and consistency, and cross-check your calculations to ensure their reliability.ConclusionIn conclusion, understanding the different types of financial models is crucial for effective decision-making in both personal and professional contexts. By choosing the right model for your specific needs and continuously improving your financial modeling skills, you can better evaluate investment opportunities, plan for future growth, and make informed decisions that contribute to long-term success. Financial models are powerful tools that, when used correctly, can unlock valuable insights and help drive strategic decision-making. So, take the time to explore and master these various financial modeling techniques to enhance your financial analysis capabilities and ensure you are well-equipped to navigate the ever-evolving world of finance.Frequently Asked QuestionsWhat is the most used type of financial model?DCF is a mostly used type of financial model. What is the tool used for making a financial model?MS Excel is widely used for the purpose of financial modelling. One can also use MS PowerPoint to depict the outcomes of financial modelling Let us take the example of the Income Statement of ABC Company. It is anticipated that the revenues are going to increase by 25 percent from the base year revenues. The cost of sales for the projected income statement would be 65 percent of projected sales.The operating expense amounted to 15 percent of the sales generated by the business, and the interest expense amounted to be the same as compared to the base year income statement. The interest expense for the base year was reported at $2,000. The business is taxed at a rate of 25 percent. Help the management prepare a projection on the income statement. The base year income statement is as follows: -Prepare the Projected Income statement as displayed below: -Step #1 - Initialize the revenue estimates, asset position, liabilities position, and base it on the revenues or the current asset size of the business. In the above example, revenue estimates increase by 25 percent for the base year.Step #2 - Baseline the cost of sales, basis the revenue estimates determined above, and as shown in the example below.Step #3 - Calculate the gross profit as the difference in revenues and cost of sales.Step #4 - Determine the operating expenses as 15 percent of the sales or the revenue estimates.Step #5 - Determine earnings before interest and taxes by taking up a difference between gross profit determined in step 3 and operating expenses at step 4.Step #6 - Deduct the base-lined interest income as assumed from the prior year from the results of step 5 to arrive at the earnings before taxes.Step #7 - Deduct the taxes from the earnings before taxes to arrive at the profit after taxes. The tariffs are determined as the 25 percent of revenues before taxes, as defined in step 6.The following shows the calculation on the income statement as shown below: -The following would be the projected income statement: - Estimate of future financial outcomes A financial forecast is an estimate of future financial outcomes for a company or project, usually applied in budgeting, capital budgeting and/or valuation. Depending on context, the term may also refer to listed company (quarterly) earnings guidance. For a country or economy, see Economic forecast. Typically, using historical internal accounting and sales data, in addition to external industry data and economic indicators, a financial forecast will be the analyst's modeled prediction of company outcomes in financial terms over a given time period. For the components / steps of business modeling here, see Outline of finance § Financial modeling. Arguably, the key aspect of preparing a financial forecast is predicting revenue; future costs, fixed and variable, as well as capital, can then be estimated as a function of sales via "common-sized analysis" - where relationships are derived from historical financial ratios and other accounting relationships.[1] At the same time, the resultant line items must talk to the business' operations:- in general, growth in revenue will require corresponding increases in working capital, fixed assets (see, here, owner earnings) and associated financing; and in the long term, profitability (and other financial ratios) should tend to the industry average;[2] see Valuation using discounted cash flows § Determine cash flow for each forecast period for more detailed discussion, and other considerations; also Cash flow forecasting. There is an extensive literature on the accuracy of analyst forecasts of revenue, profit and share price developments of companies. In general, this literature shows that analysts do not produce better forecasts than simple forecasting models.[3][4] (Additional to the above outline, for financial forecasts, analysts often also use specific financial historical information, such as the 52-week high of stock prices, to augment their analysis of stock prices.[5]) ^ "Research • AIBD Unica". aibd.unica.it. Retrieved 2023-05-10. ^ Darmawan, Ari. Hospitality-Management-Accounting. ^ Hein Schreuder and Jan Klaassen (1984), Confidential Revenue and Profit Forecasts by Management and Financial Analysts: Evidence from The Netherlands, The Accounting Review, vol. 59, no. 1, January 1984) ^ Stotz, Andrew, An Empirical Study of Financial Analysts Earnings Forecast Accuracy (May 29, 2016). Available at SSRN: 2943146 or ^ Low, R.K.Y.; Tan, E. (2016). "The Role of Analysts' Forecasts in the Momentum Effect" (PDF). International Review of Financial Analysis. 48: 67–84. doi:10.1016/j.irfa.2016.09.007. This accounting-related article is a stub. You can help Wikipedia by expanding it.vte This finance-related article is a stub. You can help Wikipedia by expanding it.vte Retrieved from " Financial forecasting is the process of estimating or predicting how a business will perform in the future. The most common type of financial forecast is an income statement; however, in a complete financial model, all three financial statements are forecasted. In this guide on how to build a financial forecast, we will complete the income statement model from revenue to operating profit or EBIT. Forecasting Revenue There are inherent tensions in model building between making your model realistic and keeping it simple and robust. The first-principles approach identifies various methods to model revenues with high degrees of detail and precision. For instance, when forecasting revenue for the retail industry, we can forecast the expansion rate and derive income per square meter. When forecasting revenue for the telecommunications industry, we can predict the market size and use current market share and competitor analysis. When forecasting revenue for any service industries, we can estimate the headcount and use the income for customer trends. On the other hand, the quick and dirty approach to robust models outlines how you can model revenues in a much more straightforward way, with the benefit that the model will be more simple and easy to use (although less accurate and detailed). With this approach, users predict future growth based on historical figures and trends. Forecasting Gross Margin and SG&A Expenses Once we finish forecasting revenues, we next want to forecast gross margin. Gross margin is usually forecast as a percent of revenues. Again, we can use historical figures or trends to forecast future gross margin. However, it is advised to take a more detailed approach, considering factors such as the cost of input, economies of scale, and learning curve. This second approach will allow your model to be more realistic, but also make it harder to follow. The next step is to forecast overhead costs: SG&A expenses. Forecasting Selling, General, and Administrative costs are often done as a percentage of revenues. Although these costs are fixed in the short term, they become increasingly variable in the long term. Therefore, when forecasting over shorter periods (weeks and months), using revenues to predict SG&A may be inappropriate. Some models forecast gross and operating margins to leave SG&A as the balancing figure. Financial Forecasting Example Let's go through an example of financial forecasting together and build the income statement forecast model in Excel. First off, you can see that all the forecast inputs are grouped in the same section, called "Assumptions and Drivers." I created separate output section groups for the income statement, balance sheet, and cash flow statement. I also created a "Supporting Schedules" section, where detailed processing calculations for PP&E and equity are broken down in order to make the model easier to follow and audit. In this article, we will only work on the assumptions and the income statement. All income statement input assumptions from revenues down to EBIT can be found in rows 8-14. All expenses are being forecasted as a percentage of sales. Only the sales forecast is based on growth over the previous year. My inputs are also ordered in the order they appear on the income statement. Now, let's move to the "Income Statement" section, where we are going to work on Column D and move downwards. To forecast sales for the first forecast year (in this case 2017), I take the previous year (C42) and grow it by the sales growth assumption in the "Assumptions & Drivers" section. The "SalesGrowthPercent" assumption is located in cell "D8". Therefore, the formula for the 2017 forecasted revenue is =C42*(1+D8). I then calculated our Cost of Goods Sold. To calculate the first forecast year's COGS, we put a minus sign in front of our forecast sales, then multiply by one minus the "GrossMargin" assumption located in cell D9. The formula reads =-D42*(1-D9). I then sum forecasted sales and COGS to calculate "Gross Profit", located in cell D44. The formula reads =SUM(D42:D43). A handy shortcut for summing is ALT + =. Next, I forecast all the expenses in rows 45 to 48 as a percentage of sales. Let's first start with "Distribution Expenses," then copy the formula down to "Depreciation." To calculate, we subtract the forecast sales and multiply by the appropriate assumption, which in this case is Distribution Expense as a Percent of Sales. The formula reads =D$42*D10. Be mindful of the $ sign because we want to make row 42 of cell D42 an absolute reference. I then copy this formula down, using the shortcut CTRL + D or fill down. Then, over to the right, using the shortcut CTRL + R or fill right. Finally, I net gross profit off with all the other operating expenses to calculate EBIT, using =SUM(D44:D48). Additional Resources Thank you for reading this guide to financial forecasting. CFI is a global provider of financial analyst training and career advancement for finance professionals. To learn more and expand your career, explore the additional relevant CFI resources below: , the free encyclopedia that anyone can edit. 117,922 active editors 6,999,634 articles in English The first UK Phantom on a test flight in 1968 From 1968 to 1992, the United Kingdom used the McDonnell Douglas F-4 Phantom II as one of its principal combat aircraft. The Phantom was procured to serve in both the Royal Navy's Fleet Air Arm and the Royal Air Force (RAF) in several different roles. Most Phantoms operated by the UK were built as a special batch containing a significant amount of British technology. Two variants were initially built: the F-4K was a carrier-based air-defence interceptor for the Fleet Air Arm, while the F-4M was initially used by the RAF for tactical strike and reconnaissance, before transitioning to an air defence role in the 1970s. In the mid-1980s, a third Phantom variant was obtained when fifteen former US Navy F-4J aircraft were purchased to augment the UK's air defences. Although the Fleet Air Arm ceased using the Phantom in 1978, the RAF retained it until 1992, when it was withdrawn as part of a series of post-Cold War defence cuts. (Full article...) Recently featured: Transportation during the 2024 Summer Olympics and Paralympics Rhine campaign of 1796 Chinese characters Archive By email More featured articles About The aftermath of the Kirkby train crash ... that the train driver in the Kirkby train crash (pictured) was found to have been using his mobile phone before the collision? ... that a tour promoting the EP For Your Validation sold out in ten minutes? ... that despite being named in college as the best at his position in the U.S., football player Buster Maddox only appeared in one NFL game? ... that the Doctor Who episode "Lux" is set in Miami, Florida, despite being filmed in Penarth, Wales? ... that Jean-Mohammed Abd-el-Jalil, a Moroccan Franciscan friar, was permitted by the Pope to keep "Muhammad" as his baptismal name? ... that Robert Mugabe's motorcade was known for speeding and killing people? ... that Elizabeth Holtzman's opponent ran an ad saying "maybe I'd like to have her as a daughter, but not as a DA" before her election as the first female Brooklyn District Attorney? ... that fighter pilot Morton D. Magoffin made pilots in his group sprint around an airfield for not saluting him? Archive Start a new article Nominate an article Nicușor Dan Author Banu Mushtaq and translator Deepa Bhasthi win the International Booker Prize for Heart Lamp: Selected Stories. Nicușor Dan (pictured) is elected as president of Romania. In the Portuguese legislative election, the Democratic Alliance wins the most seats in parliament. Austria, represented by JJ with the song "Wasted Love", wins the Eurovision Song Contest. A tornado outbreak leaves at least 27 people dead in the Midwestern and Southeastern United States. Ongoing: Gaza war M23 campaign Russian invasion of Ukraine timeline Sudanese civil war timeline Recent deaths: Jim Irsay Yury Grigorovich Yuri Vladimirov Colton Ford Werenoi Benjamin Ritchie Nominate an article May 27 Manchu Prince Dorgon 1644 – Manchu regent Dorgon (depicted) defeated rebel leader Li Zicheng of the Shun dynasty at the Battle of Shanhai Pass, allowing the Manchus to enter and conquer the capital city of Beijing. 1799 – War of the Second Coalition: Austrian forces defeated the French Army of the Danube, capturing the strategically important Swiss town of Winterthur. 1954 – The security clearance of American nuclear physicist J. Robert Oppenheimer, head of Project Y, was revoked. 1967 – Australians voted overwhelmingly to include Indigenous Australians in population counts for constitutional purposes and to allow the federal government to make special laws affecting them in states. 1997 – A destructive F5-rated tornado tracked through a subdivision of homes northwest of Jarrell, Texas, killing 27 people. Diego Ramírez de Arellano (d. 1624)Julia Ward Howe (b. 1819)Cilla Black (b. 1943)Gérard Jean-Juste (d. 2009) More anniversaries: May 26 May 27 May 28 Archive By email List of days of the year About Anemonoides blanda, the Balkan anemone, Grecian windflower, or winter windflower, is a species of flowering plant in the family Ranunculaceae. The species is native to southeast Europe and the Middle East. It grows up to 10 to 15 centimetres (4 to 6 inches) tall and is valued for its daisy-like flowers, which appear in early spring, a time when little else is in flower. The flowers are found in various colors and are radially symmetrical, containing seven or more sepals and petals. This purple A. blanda flower was photographed in Bamberg, Germany. Photograph credit: Reinhold Möller Recently featured: Bluespotted ribbontail ray Black Lives Matter art Germanicus Archive More featured pictures Community portal – The central hub for editors, with resources, links, tasks, and announcements. Village pump – Forum for discussions about Wikipedia itself, including policies and technical issues. Site news – Sources of news about Wikipedia and the broader Wikimedia movement. Teahouse – Ask basic questions about using or editing Wikipedia. Help desk – Ask questions about using or editing Wikipedia. Reference desk – Ask research questions about encyclopedic topics. Content portals – A unique way to navigate the encyclopedia. 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Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles العربية Deutsch Español فارسی Français Italiano Nederlands 日本語 Polski Português Русский Svenska Українська Tiếng Việt 中文 250,000+ articles Bahasa Indonesia Bahasa Melayu Bân-lâm-gú Български Català Čeština Dansk Eesti Ελληνικά Esperanto Euskara עברית Հայերեն Magyar Norsk bokmål Română Simple English Slovenčina Srpski Srpskohrvatski Suomi Türkçe Oʻzbekcha 50,000+ articles Asturianu Azərbaycanca □□□□□ Bosanski کوردی Frysk Gaeilge Galego Hrvatski ქართული Kurdî Latviešu Lietuvių □□□□□□ Македонски □□□□□□□□□□ Norsk nynorsk □□□□□□ Shqip Slovenščina □□□ □□□□□□ اردو Retrieved from " 2 This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.Find sources: "1644" – news · newspapers · books · scholar · JSTOR (August 2016) (Learn how and when to remove this message) Calendar year Years Millennium 2nd millennium Centuries 16th century 17th century 18th century Decades 1620s 1630s 1640s 1650s 1660s Years 1641 1642 1643 1644 1645 1646 1647 vte July 1: The Battle of Colberger Heide is fought between Sweden and Denmark-Norway off of the German coast. July 2: Parliament wins control of northern England from King Charles in the Battle of Marston Moor. 1644 by topic Arts and science Architecture Art Literature Music Science Leaders State leaders Colonial governors Religious leaders Birth and death categories Births – Deaths Establishments and disestablishments categories Establishments – Disestablishments Works category Works vte 1644 in various calendarsGregorian calendar1644MDCXLIVAb urbe condita2397Armenian calendar1093ԹՎ ՌՂԳAssyrian calendar6394Balinese saka calendar1565–1566Bengali calendar1050–1051Berber calendar2594English Regnal year19 Cha. 1 – 20 Cha. 1Buddhist calendar2188Burmese calendar1006Byzantine calendar7152–7153Chinese calendar癸未年 (Water Goat)4341 or 4134 — to —甲申年 (Wood Monkey)4342 or 4135Coptic calendar1360–1361Discordian calendar2810Ethiopian calendar1636–1637Hebrew calendar5404–5405Hindu calendars - Vikram Samvat1700–1701 - Shaka Samvat1565–1566 - Kali Yuga4744–4745Holocene calendar11644Igbo calendar644–645Iranian calendar1022–1023Islamic calendar1053–1054Japanese calendarKan'ei 21 / Shōhō 1(正保元年)Javanese calendar1565–1566Julian calendarGregorian minus 10 daysKorean calendar3977Minguo calendar268 before ROC民前268年Nanakshahi calendar176Thai solar calendar2186–2187Tibetan calendar阴水羊年(female Water-Goat)1770 or 1389 or 617 — to —阳木猴年(male Wood-Monkey)1771 or 1390 or 618 1644 (MDCXLIV) was a leap year starting on Friday of the Gregorian calendar and a leap year starting on Monday of the Julian calendar, the 1644th year of the Common Era (CE) and Anno Domini (AD) designations, the 644th year of the 2nd millennium, the 44th year of the 17th century, and the 5th year of the 1640s decade. As of the start of 1644, the Gregorian calendar was 10 days ahead of the Julian calendar, which remained in localized use until 1923. Calendar year It is one of eight years (CE) to contain each Roman numeral once (1000(M)+500(D)+100(C)+(-10(X)+50(L))+(-1(I)+5(V)) = 1644). Kolumna Zygmunta erected. January 22 – The Royalist Oxford Parliament is first assembled by King Charles I of England.[1] January 26 – First English Civil War: Battle of Nantwich – The Parliamentarians defeat the Royalists, allowing them to end the 6-week siege of the Cheshire town.[2] January 30 Dutch explorer Abel Tasman departs from Batavia in the Dutch East Indies (modern-day Jakarta in Indonesia) on his second major expedition for the Dutch East India Company, to map the north coast of Australia. Tasman commands three ships, Limmen, Zeemeeuw and Braek, and returns to Batavia at the beginning of August with no major discoveries. Battle of Ochmatów: Polish–Lithuanian Commonwealth forces under hetman Stanisław Koniecpolski secure a substantial victory over the horde of Crimean Tatars under Tugay Bey. February 5 – The first livestock branding law in America is passed in Connecticut.[3] March 24 – Roger Williams is granted an official grant for his Rhode Island Colony from the Parliament of England, allowing the establishment of a general assembly. April 18 – Opchanacanough leads the Powhatan Indians in an unsuccessful uprising against the English at Jamestown. Although 300 of the English colonists are slain, the settlers pursue Opchanacanough, who is imprisoned in Jamestown for the rest of his life.[4] This is the last such Indian rebellion in the region. April 25 – A popular Chinese rebellion led by Li Zicheng sacks Beijing, prompting Chongzhen, the last emperor of the Ming dynasty, to commit suicide. May 6 – Johan Mauritius resigns as Governor of Brazil.[3] May 25 – Ming general Wu Sangui forms an alliance with the invading Manchus and opens the gates of the Great Wall of China at Shanhaiguan Pass, letting the Manchus through towards the capital Beijing. May 26 – Battle of Montijo: The Kingdom of Portugal is victorious over Habsburg Spain, in the first major action between the two nations during the Portuguese Restoration War. May 27 – Battle of Shanhai Pass: The Manchu Qing dynasty and Wu Sangui gain a decisive victory over Li Zicheng's Shun dynasty. June 3 – Li Zicheng proclaims himself emperor of China. June 6 – The invading Qing army, with the help of Ming general Wu Sangui, captures Beijing in China, marking the beginning of Manchu rule over China proper. June 11 – During the English Civil War, Prince Rupert and his men take Liverpool Castle.[5] Liverpool is later reclaimed by Sir John Moore. July 1 – Torstenson War: Battle of Colberger Heide – The Dano-Norwegian and Swedish fleets fight a naval battle off the coast of Schleswig-Holstein. The battle is indecisive but represents a minor success for the Dano-Norwegian fleet. July 2 – English Civil War: Battle of Marston Moor – The Parliamentarians crush the Royalists in Yorkshire, ending Charles I's hold on the north of England.[6] September 1 – English Civil War: Battle of Tippermuir – Montrose defeats Lord Elcho's Covenanters, reviving the Royalist cause in Scotland. September 2 – English Civil War: Second Battle of Lostwithiel (in Cornwall) – Charles I and the Royalists gain their last major victory.[7] September 15 – Pope Innocent X succeeds Pope Urban VIII, becoming the 236th pope.[8] October 1 – The Jews of Mogilev, Polish–Lithuanian Commonwealth, are attacked during Tashlikh. November 8 – The Shunzhi Emperor, the second emperor of the Qing dynasty, is enthroned in Beijing after the collapse of the Ming dynasty as the first Qing emperor to rule over China proper. November 23 Battle of Jüterbog (December 3 New Style): Sweden's forces defeat those of the Holy Roman Empire. Areopagitica, an appeal for freedom of speech written by John Milton, is published in London. November – The Castle of Elvas in Portugal resists a 9-day siege by the Spanish during the Portuguese Restoration War. December 8 (December 18 New Style) – As Christina comes of age, she is made ruling queen of Sweden. December – Bubonic plague breaks out in Edinburgh (Scotland). A Spanish officer is murdered in St. Dominic's Church, Macau during mass by colonists loyal to Portugal during the Portuguese Restoration War. Sigismund's Column is erected in Warsaw to commemorate King Sigismund III Vasa, who moved the capital of Poland from Kraków to Warsaw in 1596. Philosopher René Descartes publishes Principia Philosophiae (Principles of Philosophy) in Amsterdam. The opera Ormindo is first performed in Venice (music by Francesco Cavalli, and libretto by Giovanni Faustini). The West India Company[which?] displays greater interest in profit than in colonization.[vague] Thomas Britton Veit Hans Schnorr von Carolsfeld Otto Mencke Henry Winstanley Henrietta of England January 9 – Robert Gibbes, English-born landgrave in South Carolina (d. 1715) January 10 Louis François, duc de Boufflers, Marshal of France (d. 1711) Celestino Sfondrati, Italian Catholic cardinal (d. 1696) January 11 – Hayashi Hōkō, Japanese philosopher (d. 1732) January 14 – Thomas Britton, English concert promoter (d. 1714) January 18 – John Partridge, English astrologer (d. 1708) January 23 – Jonas Budde, Norwegian army officer (d. 1710) January 25 – Antoine Thomas, Jesuit missionary priest and astronomer (d. 1709)[9] January 26 – Thomas Boylston, American colonial doctor (d. 1695) February 2 Isaac Chayyim Cantarini, Italian rabbi (d. 1723) Johannes Hancke, German writer (d. 1713) February 7 – Nils Bielke, member of the High Council of Sweden (d. 1716) February 8 – Pierre de La Broue, American bishop (d. 1720) February 12 – Jakob Ammann, Swiss founder of the Amish sect (d. 1712) February 24 – Maria Elisabeth Lämmerhirt, German mother of Johann Sebastian Bach (d. 1694) March 1 – Simon Foucher, French polemicist (d. 1696) March 15 – Veit Hans Schnorr von Carolsfeld, German iron and cobalt magnate (d. 1715) March 21 – Sir Walter Bagot, 3rd Baronet, English politician (d. 1704) March 22 Otto Mencke, German philosopher and scientist (d. 1707) Sir James Rushout, 1st Baronet, English politician (d. 1698) March 25 – Heinrich von Cocceji, German jurist from Bremen (d. 1719) March 31 – Henry Winstanley, English engineer (d. 1703) April 6 – António Luís de Sousa, 2nd Marquis of Minas, Portuguese general, governor-general of Brazil (d. 1721) April 7 Nathaniel Johnson, American politician (d. 1713) François de Neufville, duc de Villeroy, French soldier (d. 1730) April 11 – Marie Jeanne Baptiste of Savoy-Nemours, Duchess of Savoy (d. 1724) April 17 – Abraham Storck, Dutch painter (d. 1708) April 21 – Conrad von Reventlow, Danish statesman, first Grand Chancellor of Denmark (d. 1708) May 2 – Robert Cotton, English politician (d. 1717) May 4 – Juan Caballero y Ocio, Spanish priest remarkable for lavish gifts to the Catholic Church and charity (d. 1707) May 5 – Sir Richard Newdigate, 2nd Baronet, English landowner (d. 1710) May 26 – Michael Ettmüller, German physician (d. 1683) June 2 – William Salmon, English medical writer (d. 1713) June 7 – Johann Christoph Volkamer, German botanist (d. 1720) June 16 – Henrietta Anne Stuart, Princess of Scotland, England and Ireland and Duchess of Orléans (d. 1670)[10] June 17 – Johann Wolfgang Franck, German baroque composer (d. 1710) July 2 – Abraham a Sancta Clara, German Augustinian friar (d. 1709) July 4 – Josceline Percy, 11th Earl of Northumberland, English noble (d. 1670) July 7 – Joan Geelvinck, Dutch politician (d. 1707) July 10 – Miguel Bayot, Spanish Catholic prelate, Bishop of Cebu (from 1697) (d. 1700) July 22 – Peter Drelincourt, Irish chaplain (d. 1722) August 6 Christian Ernst, Margrave of Brandenburg-Bayreuth (1655–1712) (d. 1712) Louise de La Vallière, French mistress of Louis XIV of France (d. 1710)[11] August 12 – Heinrich Ignaz Franz Biber, Bohemian composer and violinist (d. 1704) August 28 (bapt.) – Gilles Schey, Dutch admiral (d. 1703) August 29 – Anne Bourdon, nun in New France (d. 1711) August 30 – Thomas Tufton, 6th Earl of Thanet, English politician (d. 1729) September 3 – Richard Newport, 2nd Earl of Bradford, English politician (d. 1723) September 6 – Juan Bautista Cabanilles, Spanish composer (d. 1712) September 11 – Jacob Rotius, Dutch painter (d. 1681) September 22 – Jacques Échard, French Dominican, historian of the Order (d. 1724) September 25 – Ole Rømer, Danish astronomer (d. 1710) October 1 – Jean Rousseau, French viol player (d. 1699) October 2 – François-Timoléon de Choisy, French abbé, author and cross-dresser (d. 1724) October 3 – Adriaen Frans Boudewijns, landscape painter (d. 1719) October 12 – Christopher Sandius, Dutch Arian writer (d. 1680) October 13 – Sipihr Shikoh, Mughal Emperor (d. 1708) October 14 – William Penn, English Quaker and founder of Pennsylvania (d. 1718) October 26 – Mathias Steuchius, Swedish archbishop (d. 1730) November 23 (bapt.) – Cornelia van der Gon, Dutch art collector (d. 1701) December 8 – Maria d'Este, Italian noble (d. 1684) December 9 – Robert Kirk, Scottish folklorist, Bible translator, Gaelic scholar (d. 1692) December 23 – Tomás de Torrejón y Velasco, Spanish composer, musician and organist (d. 1728) December 25 – Walter Scott, Earl of Tarras, Scottish nobleman (d. 1693) December 29 – Philips van Almonde, Dutch Lieutenant Admiral (d. 1711) Matsuo Bashō, Japanese poet (d. 1694) Pietro Erardi, Maltese chaplain and painter (d. 1727)[12] Antonio Stradivari, Italian violin maker (d. 1737)[13] Pope Urban VIII Johannes Wtenbogaert January 20 – Stefano Amadei, Italian painter (b. 1580) January 30 – William Chillingworth, controversial English churchman (b. 1602) January 31 – Georg II of Fleckenstein-Dagstuhl, German nobleman (b. 1588) February 28 – Guru Har Gobind, the Sixth Sikh Guru (b. 1595) March 15 – Countess Louise Juliana of Nassau, Regent of Bohemia (b. 1576) March 24 – Cecilia Renata of Austria, Queen of Poland (b. 1611) March 29 – Lord John Stewart, Scottish aristocrat, Royalist commander in the English Civil War (b. 1621) April 2 – Diego Salcedo, Spanish bishop (b. 1575) April 10 – Reverend William Brewster, English Pilgrim leader (b. 1567) April 25 – Chongzhen, last Ming Emperor of China (suicide) (b. 1611) April 28 – Zsófia Bosnyák, Hungarian noblewoman (b. 1609) May 26 – Alfonso III d'Este, Duke of Modena, Italian noble (b. 1591) June 17 Anne de Montafié, Countess of Clermont-en-Beauvaisis, French countess (b. 1577) John of St. Thomas, Portuguese philosopher (b. 1589) July 4 – Brian Twyne, English archivist (b. 1581) July 7 – Hedwig of Hesse-Kassel, countess consort of Schaumburg (b. 1569) July 16 – Giovanni Biliverti, Italian painter (b. 1585) July 25 – Amar Singh Rathore, Rajput nobleman affiliated with the royal house of Marwar (b. 1613) July 29 – Pope Urban VIII (b. 1568)[14] August 25 – Johann Heinrich Alting, German Lutheran theologian (b. 1583) September 4 – Johannes Wtenbogaert, Dutch leader of the Remonstrants (b. 1557) September 7 Guido Bentivoglio, Italian statesman and historian (b. 1579)[15] Ralph Corbie, Irish Jesuit (b. 1598) September 8 John Coke, English politician (b. 1563)[16] Francis Quarles, English poet (b. 1592)[17] October 6 – Elisabeth of France, queen of Philip IV of Spain (b. 1602) October 19 – Johann Friedrich, Count Palatine of Sulzbach-Hilpoltstein (b. 1587) October 30 – Jorge de Cárdenas y Manrique de Lara, Spanish noble (b. 1584) November 6 – Thomas Roe, English diplomat (b. c. 1581) November 10 – Luis Vélez de Guevara, Spanish writer (b. 1579) November 20 – Nathaniel Foote, American colonist (b. 1592) November 24 – Deodat del Monte, Flemish painter, architect (b. 1582) December 20 – Albert IV, Duke of Saxe-Eisenach (from 1640) (b. 1599) December 23 – Sir Alexander Carew, 2nd Baronet, English politician (b. 1609) December 28 – John Bankes, Attorney General and Chief Justice to King Charles I of England (b. 1589) December 30 – Jan Baptist van Helmont, Flemish chemist (b. 1577) ^ Braddick, Michael J. (2015). The Oxford handbook of the English revolution. Oxford, UK; New York: Oxford University Press. p. 103. ISBN 9780199695898. ^ Coward, Barry (1994). The Stuart age: England, 1603-1714. London New York: Longman. p. 223. ISBN 9780582067226. ^ a b "What Happened In 1644". hisdates.com. Retrieved March 3, 2016. ^ Edward S. Ellis, et al., The People's History of the World; Including Two Volumes on the Races of Mankind, Volume 5: United States (Chicago: The History Publishing Association, 1902) p. 127 ("The second outbreak occurred April 18th, 1644... Opechankano was taken prisoner, and died in Jamestown while a captive") ^ "Rupert, Prince", by Charles Harding Firth, in The Dictionary of National Biography, Volume 17 (Oxford University Press, 1922) p. 408 ("Rupert returned to Wales.. Defeating the parliamentarians at Stockport, he forced his way into Lancashire, stormed Bolton on 28 May, and captured Liverpool on 11 June", quoting Ormerod, Civil War Tracts of Lancashire, p. 187) ^ Levene, Mark (1999). The massacre in history. New York: Berghahn Books. p. 93. ISBN 9781571819345. ^ Jeremy Black (1996). The Cambridge Illustrated Atlas of Warfare: Renaissance to Revolution, 1492-1792. Cambridge University Press. p. 80. ^ Levillain, Philippe (2002). The papacy : an encyclopedia. New York: Routledge. p. 801. ISBN 9780415922289. ^ Walle, Willy (2003). The history of the relations between the Low Countries and China in the Qing era (1644-1911. Leuven, Belgium: Leuven University Press Ferdinand Verbiest Foundation. p. 90. ISBN 9789058673152. ^ Lowther, Kenneth (1979). Dartmoor, Exeter... London: Ward Lock. p. 35. ISBN 9780706357929. ^ Dumas, Alexandre (1998). The Vicomte de Bragelonne. Oxford New York: Oxford University Press. p. 674. ISBN 9780192834638. ^ Schiavone, Michael J. (2009). Dictionary of Maltese Biographies Vol. 1 A–F. Pietà: Pubblikazzjonijiet Indipendenza. p. 756. ISBN 9789993291329. ^ Fetis, FirstName (2013). Anthony Stradivari the Celebrated Violin Maker. Newburyport: Dover Publications. p. x. ISBN 9780486316529. ^ Baker, Christopher (2002). Absolutism and the scientific revolution, 1600-1720 : a biographical dictionary. Westport, Conn: Greenwood Press. p. 382. ISBN 9780313308277. ^ John Evelyn (2000). The Diary of John Evelyn: 1620-1649. Clarendon Press. p. 379. ^ Venning, Timothy (2005). Compendium of British office holders. Houndmills, Basingstoke, Hampshire New York: Palgrave Macmillan. p. 118. ISBN 9780230505872. ^ Baker, Christopher (2002). Absolutism and the scientific revolution, 1600-1720 : a biographical dictionary. Westport, Conn: Greenwood Press. p. 313. ISBN 9780313308277. Retrieved from " 3One hundred years, from 1501 to 1600 This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.Find sources: "16th century" – news · newspapers · books · scholar · JSTOR (September 2022) (Learn how and when to remove this message) Millennia 2nd millennium Centuries 15th century 16th century 17th century Timelines 15th century 16th century 17th century State leaders 15th century 16th century 17th century Decades 1500s 1510s 1520s 1530s 1540s 1550s 1560s 1570s 1580s 1590s Categories: Births – Deaths Establishments – Disestablishments vte The world map by the Italian Amerigo Vespucci (from whose name the word America is derived) and Belgian Gerardus Mercator shows (besides the classical continents Europe, Africa, and Asia) the Americas as America sive India Nova', New Guinea, and other islands of Southeast Asia, as well as a hypothetical Arctic continent and a yet undetermined Terra Australis.[1]The 16th century began with the Julian year 1501 (represented by the Roman numerals MDI) and ended with either the Julian or the Gregorian year 1600 (MDC), depending on the reckoning used (the Gregorian calendar introduced a lapse of 10 days in October 1582).[1] The Renaissance in Italy and Europe saw the emergence of important artists, authors and scientists, and led to the foundation of important subjects which include accounting and political science. Copernicus proposed the heliocentric universe, which was met with strong resistance, and Tycho Brahe refuted the theory of celestial spheres through observational measurement of the 1572 appearance of a Milky Way supernova. These events directly challenged the long-held notion of an immutable universe supported by Ptolemy and Aristotle, and led to major revolutions

in astronomy and science. Galileo Galilei became a champion of the new sciences, invented the first thermometer and made substantial contributions in the fields of physics and astronomy, becoming a major figure in the Scientific Revolution in Europe. Spain and Portugal colonized large parts of Central and South America, followed by France and England in Northern America and the Lesser Antilles. The Portuguese became the masters of trade between Brazil, the coasts of Africa, and their possessions in the Indies, whereas the Spanish came to dominate the Greater Antilles, Mexico, Peru, and opened trade across the Pacific Ocean, linking the Americas with the Indies. English and French privateers began to practice persistent theft of Spanish and Portuguese treasures. This era of colonialism established mercantilism as the leading school of economic thought, where the economic system was viewed as a zero-sum game in which any gain by one party required a loss by another. The mercantilist doctrine encouraged the many intra-European wars of the period and arguably fueled European expansion and imperialism throughout the world until the 19th century or early 20th century. The Reformation in central and northern Europe gave a major blow to the authority of the papacy and the Catholic Church. In England, the British-Italian Alberico Gentili wrote the first book on public international law and divided secularism from canon law and Catholic theology. European politics became dominated by religious conflicts, with the groundwork for the epochal Thirty Years' War being laid towards the end of the century. In the Middle East, the Ottoman Empire continued to expand, with the sultan taking the title of caliph, while dealing with a resurgent Persia. Iran and Iraq were caught by a major popularity of the Shia sect of Islam under the rule of the Safavid dynasty of warrior-mystics, providing grounds for a Persia independent of the majority-Sunni Muslim world.[2] In the Indian subcontinent, following the defeat of the Delhi Sultanate and Vijayanagara Empire, new powers emerged, the Sur Empire founded by Sher Shah Suri, Deccan sultanates, Rajput states, and the Mughal Empire[3] by Emperor Babur, a direct descendant of Timur and Genghis Khan.[4] His successors Humayun and Akbar, enlarged the empire to include most of South Asia. Japan suffered a severe civil war at this time, known as the Sengoku period, and emerged from it as a unified nation under Toyotomi Hideyoshi. China was ruled by the Ming dynasty, which was becoming increasingly isolationist, coming into conflict with Japan over the control of Korea as well as Japanese pirates. In Africa, Christianity had begun to spread in Central Africa and Southern Africa. Until the Scramble for Africa in the late 19th century, most of Africa was left uncolonized. For timelines of earlier events, see 15th century and Timeline of the Middle Ages. Mona Lisa, by Leonardo da Vinci, c. 1503–1506, one of the world's best-known paintings 1501: Michelangelo returns to his native Florence to begin work on the statue David. 1501: Safavid dynasty reunifies Iran and rules over it until 1736. Safavids adopt a Shia branch of Islam.[5] 1501: First Battle of Cannanore between the Third Portuguese Armada and Kingdom of Cochin under João da Nova and Zamorin of Kozhikode's navy marks the beginning of Portuguese conflicts in the Indian Ocean. 1502: First reported African slaves in the New World 1502: The Crimean Khanate sacks Sarai in the Golden Horde, ending its existence. 1503: Spain defeats France at the Battle of Cerignola. Considered to be the first battle in history won by gunpowder small arms. 1503: Leonardo da Vinci begins painting the Mona Lisa and completes it three years later. 1503: Nostradamus is born on either December 14 or December 21. 1504: A period of drought, with famine in all of Spain. 1504: Death of Isabella I of Castile; Joanna of Castile becomes the Queen. 1504: Foundation of the Sultanate of Sennar by Amara Dunqas, in what is modern Sudan 1505: Zhengde Emperor ascends the throne of Ming dynasty. 1505: Martin Luther enters St. Augustine's Monastery at Erfurt, Germany, on 17 July and begins his journey to instigating the Reformation. 1505: Sultan Trenggono builds the first Muslim kingdom in Java, called Demak, in Indonesia. Many other small kingdoms were established in other islands to fight against Portuguese. Each kingdom introduced local language as a way of communication and unity. 1506: Leonardo da Vinci completes the Mona Lisa. 1506: King Afonso I of Kongo wins the battle of Mbanza Kongo, resulting in Catholicism becoming Kongo's state religion.Battle of Cerignola: El Gran Capitan finds the corpse of Louis d'Armagnac, Duke of Nemours 1506: At least two thousand converted Jews are massacred in a Lisbon riot, Portugal. 1506: Christopher Columbus dies in Valladolid, Spain. 1506: Poland is invaded by Tatars from the Crimean Khanate. 1507: The first recorded epidemic of smallpox in the New World on the island of Hispaniola. It devastates the native Taíno population.[6] 1507: Afonso de Albuquerque conquered Hormuz and Muscat, among other bases in the Persian Gulf, taking control of the region at the entrance of the Gulf. 1508: The Christian-Islamic power struggle in Europe and West Asia spills over into the Indian Ocean as Battle of Chaul during the Portuguese-Mamluk War 1508–1512: Michelangelo paints the Sistine Chapel ceiling. 1509: The defeat of joint fleet of the Sultan of Gujarat, the Mamlûk Burji Sultanate of Egypt, and the Zamorin of Calicut with support of the Republic of Venice and the Ottoman Empire in Battle of Diu marks the beginning of Portuguese dominance of the Spice trade and the Indian Ocean. 1509: The Portuguese king sends Diogo Lopes de Sequeira to find Malacca, the eastern terminus of Asian trade. After initially receiving Sequeira, Sultan Mahmud Shah captures and/or kills several of his men and attempts an assault on the four Portuguese ships, which escape.[7] The Javanese fleet is also destroyed in Malacca. 1509: Krishnadevaraya ascends the throne of Vijayanagara Empire. Afonso de Albuquerque 1509–1510: The 'great plague' in various parts of Tudor England.[8] 1510: Afonso de Albuquerque of Portugal conquers Goa in India. 1511: Afonso de Albuquerque of Portugal conquers Malacca, the capital of the Sultanate of Malacca in present-day Malaysia. 1512: Copernicus writes Commentariolus, and proclaims the Sun the center of the Solar System. 1512: The southern part (historical core) of the Kingdom of Navarre is invaded by Castile and Aragon. 1512: Qutb Shahi dynasty, founded by Quli Qutb Mulk, rules Golconda Sultanate until 1687. 1512: The first Portuguese exploratory expedition was sent eastward from Malacca (in present-day Malaysia) to search for the 'Spice Islands' (Maluku) led by Francisco Serrão. Serrão is shipwrecked but struggles on to Hitu (northern Ambon) and wins the favour of the local rulers.[9] 1513: Machiavelli writes The Prince, a treatise about political philosophy 1513: The Portuguese mariner Jorge Álvares lands at Macau, China, during the Ming dynasty. 1513: Henry VIII defeats the French at the Battle of the Spurs. 1513: The Battle of Flodden Field in which invading Scots are defeated by Henry VIII's forces. 1513: Sultan Selim I ("The Grim") orders the massacre of Shia Muslims in Anatolia (present-day Turkey). 1513: Vasco Núñez de Balboa, in service of Spain arrives at the Pacific Ocean (which he called Mar del Sur) across the Isthmus of Panama. He was the first European to do so. 1514: The Battle of Orsha halts Muscovy's expansion into Eastern Europe. 1514: Dózsa rebellion (peasant revolt) in Hungary.Martin Luther initiated the Reformation with his Ninety-five Theses in 1517. 1514: The Battle of Chaldiran, the Ottoman Empire gains decisive victory against Safavid dynasty. 1515: Ascension of Francis I of France as King of France following the death of Louis XII. 1515: The Ottoman Empire wrests Eastern Anatolia from the Safavids after the Battle of Chaldiran. 1515: The Ottomans conquer the last beyliks of Anatolia, the Dulkadirs and the Ramadanids. 1516–1517: The Ottomans defeat the Mamluks and gain control of Egypt, Arabia, and the Levant. 1517: The Sweating sickness epidemic in Tudor England.[10] 1517: The Reformation begins when Martin Luther posts his Ninety-five Theses in Saxony. 1518: The Treaty of London was a non-aggression pact between the major European nations. The signatories were Burgundy, France, England, the Holy Roman Empire, the Netherlands, the Papal States and Spain, all of whom agreed not to attack one another and to come to the aid of any that were under attack. 1518: Mir Chakar Khan Rind leaves Baluchistan and settles in Punjab. 1518: Leo Africanus, also known as al-Hasan ibn Muhammad al-Wazzan al-Fasi, an Andalusian Berber diplomat who is best known for his book Descrittione dell’Africa (Description of Africa), is captured by Spanish pirates; he is taken to Rome and presented to Pope Leo X. 1518: The dancing plague of 1518 begins in Strasbourg, lasting for about one month. 1519: Leonardo da Vinci dies of natural causes on May 2.Europe at the time of the accession of Charles V in 1519 1519: Wang Yangming, the Chinese philosopher and governor of Jiangxi province, describes his intent to use the firepower of the fo-lang-ji, a breech-loading Portuguese culverin, in order to suppress the rebellion of Prince Zhu Chenhao. 1519: Barbary pirates led by Hayreddin Barbarossa, a Turk appointed to ruling position in Algiers by the Ottoman Empire, raid Provence and Toulon in southern France. 1519: Death of Emperor Maximilian; Charles I of Austria, Spain, and the Low Countries becomes Emperor of Holy Roman Empire as Charles V, Holy Roman Emperor (ruled until 1556). 1519–1522: Spanish expedition commanded by Magellan and Elcano are the first to Circumnavigate the Earth. 1519–1521: Hernán Cortés leads the Spanish conquest of the Aztec Empire. Ferdinand Magellan led the first expedition that circumnavigated the globe in 1519–1522. 1520–1566: The reign of Suleiman the Magnificent marks the zenith of the Ottoman Empire. 1520: The first European diplomatic mission to Ethiopia, sent by the Portuguese, arrives at Massawa 9 April, and reaches the imperial encampment of Emperor Dawit II in Shewa 9 October. 1520: Vijayanagara Empire forces under Krishnadevaraya defeat the Adil Shahi under at the Battle of Raichur 1520: Sultan Ali Mughayat Shah of Aceh begins an expansionist campaign capturing Daya on the west Sumatran coast (in present-day Indonesia), and the pepper and gold producing lands on the east coast. 1520: The Portuguese established a trading post in the village of Lamakera on the eastern side of Solor (in present-day Indonesia) as a transit harbour between Maluku and Malacca. 1521: Belgrade (in present-day Serbia) is captured by the Ottoman Empire. 1521: After building fortifications at Tuen Mun, the Portuguese attempt to invade Ming dynasty China, but are expelled by Chinese naval forces. 1521: Philippines encountered by Ferdinand Magellan. He was later killed in the Battle of Mactan in central Philippines in the same year. 1521: Jiajing Emperor ascended the throne of Ming dynasty, China. 1521: November, Ferdinand Magellan's expedition reaches Maluku (in present-day Indonesia) and after trade with Ternate returns to Europe with a load of cloves. 1521: Pati Unus leads the invasion of Malacca (in present-day Malaysia) against the Portuguese occupation. Pati Unus was killed in this battle, and was succeeded by his brother, sultan Trenggana. 1522: Rhodes falls to the Ottomans of Suleiman the Magnificent.[11]Sack of Rome of 1527 by Charles V's forces (painting by Johannes Lingelbach) 1522: The Portuguese ally themselves with the rulers of Ternate (in present-day Indonesia) and begin construction of a fort.[9] 1522: August, Luso-Sundanese Treaty signed between Portugal and Sunda Kingdom granted Portuguese permit to build fortress in Sunda Kelapa. 1523: Sweden gains independence from the Kalmar Union. 1523: The Cacao bean is introduced to Spain by Hernán Cortés 1524–1525: German Peasants' War in the Holy Roman Empire. 1524: Giovanni da Verrazzano is the first European to explore the Atlantic coast of North America between South Carolina and Newfoundland. 1524: Ismail I, the founder of Safavid dynasty, dies and Tahmasp I becomes king.Gun-wielding Ottoman Janissaries and defending Knights of Saint John at the siege of Rhodes in 1522, from an Ottoman manuscript 1525: Timurid Empire forces under Babur defeat the Lodi dynasty at the First Battle of Panipat, end of the Delhi Sultanate. 1525: German and Spanish forces defeat France at the Battle of Pavia, Francis I of France is captured. 1526: The Ottomans defeat the Kingdom of Hungary at the Battle of Mohács. 1526: Mughal Empire, founded by Babur. 1527: Sack of Rome with Pope Clement VII escaping and the Swiss Guards defending the Vatican being killed. The sack of the city of Rome considered the end of the Italian Renaissance. 1527: Protestant Reformation begins in Sweden. 1527: The last ruler of Majapahit falls from power. This state (located in present-day Indonesia) was finally extinguished at the hands of the Demak. A large number of courtiers, artisans, priests, and members of the royalty moved east to the island of Bali; however, the power and the seat of government transferred to Demak under the leadership of Pangeran, later Sultan Fatah. 1527: June 22, The Javanese Prince Fatahillah of the Cirebon Sultanate successfully defeated the Portuguese armed forces at the site of the Sunda Kelapa Harbor. The city was then renamed Jayakarta, meaning "a glorious victory." This eventful day came to be acknowledged as Jakarta's Founding Anniversary. 1527: Mughal Empire forces defeat the Rajput led by Rana Sanga of Mewar at the Battle of Khanwa 1529: The Austrians defeat the Ottoman Empire at the siege of Vienna. 1529: Treaty of Zaragoza defined the antimeridian of Tordesillas attributing the Moluccas to Portugal and Philippines to Spain. 1529: Imam Ahmad Gurey defeats the Ethiopian Emperor Dawit II in the Battle of Shimbra Kure, the opening clash of the Ethiopian–Adal War. Spanish conquistadors with their Tlaxcallan allies fighting against the Otomies of Metztitlan in present-day Mexico, a 16th-century codex 1531–1532: The Church of England breaks away from the Catholic Church and recognizes King Henry VIII as the head of the Church. 1531: The Inca Civil War is fought between the two brothers, Atahualpa and Huáscar. 1532: Francisco Pizarro leads the Spanish conquest of the Inca Empire. 1532: Foundation of São Vicente, the first permanent Portuguese settlement in the Americas. 1533: Anne Boleyn becomes Queen of England. 1533: Elizabeth Tudor is born. 1534: Jacques Cartier claims Canada for France. 1534: The Ottomans capture Baghdad from the Safavids. 1534: Affair of the Placards, where King Francis I becomes more active in repression of French Protestants. 1535: The Münster Rebellion, an attempt of radical, millennialist, Anabaptists to establish a theocracy, ends in bloodshed. 1535: The Portuguese in Ternate depose Sultan Tabariji (or Tabarija) and send him to Portuguese Goa where he converts to Christianity and bequeaths his Portuguese godfather Jordao de Freitas the island of Ambon.[12] Hairun becomes the next sultan. 1536: Catherine of Aragon dies in Kimbolton Castle, in England.Territorial expansion of the Ottoman Empire under Suleiman (in red and orange) 1536: In England, Anne Boleyn is beheaded for adultery and treason. 1536: Establishment of the Inquisition in Portugal. 1536: Foundation of Buenos Aires (in present-day Argentina) by Pedro de Mendoza. 1537: The Portuguese establish Recife in Pernambuco, north-east of Brazil. 1537: William Tyndale's partial translation of the Bible into English is published, which would eventually be incorporated into the King James Bible. 1538: Gonzalo Jiménez de Quesada founds Bogotá. 1538: Spanish–Venetian fleet is defeated by the Ottoman Turks at the Battle of Preveza. 1539: Hernando de Soto explores inland North America. Nicolaus Copernicus 1540: The Society of Jesus, or the Jesuits, is founded by Ignatius of Loyola and six companions with the approval of Pope Paul III. 1540: Sher Shah Suri founds the Suri dynasty in South Asia, an ethnic Pashtun (Pathan) of the house of Sur, who supplanted the Mughal dynasty as rulers of North India during the reign of the relatively ineffectual second Mughal emperor Humayun. Sher Shah Suri decisively defeats Humayun in the Battle of Bilgram (May 17, 1540). 1541: Pedro de Valdivia founds Santiago in Chile. 1541: An Algerian military campaign by Charles V of Spain (Habsburg) is unsuccessful. 1541: Amazon River is encountered and explored by Francisco de Orellana. 1541: Capture of Buda and the absorption of the major part of Hungary by the Ottoman Empire. 1541: Sahib I Giray of Crimea invades Russia. 1542: The Italian War of 1542–1546 War resumes between Francis I of France and Emperor Charles V. This time Henry VIII is allied with the Emperor, while James V of Scotland and Sultan Suleiman I are allied with the French. 1542: Akbar The Great is born in the Rajput Umarkot Fort 1542: Spanish explorer Ruy López de Villalobos named the island of Samar and Leyte Las Islas Filipinas honoring Philip II of Spain and became the official name of the archipelago. 1543: Ethiopian/Portuguese troops defeat the Adal army led by Imam Ahmad Gurey at the Battle of Wayna Daga; Imam Ahmad Gurey is killed at this battle. 1543: Copernicus publishes his theory that the Earth and the other planets revolve around the Sun 1543: The Nanban trade period begins after Portuguese traders make contact with Japan. 1544: The French defeat an Imperial–Spanish army at the Battle of Ceresole.Scenes of everyday life in Ming China, by Qiu Ying 1544: Battle of the Shirts in Scotland. The Frasers and Macdonalds of Clan Ranald fight over a disputed chiefship; reportedly, 5 Frasers and 8 Macdonalds survive. 1545: Songhai forces sack the Malian capital of Niani 1545: The Council of Trent meets for the first time in Trent (in northern Italy). 1546: Michelangelo Buonarroti is made chief architect of St. Peter's Basilica. 1546: Francis Xavier works among the peoples of Ambon, Ternate and Morotai (Moro) laying the foundations for a permanent mission. (to 1547) 1547: Henry VIII dies in the Palace of Whitehall on 28 January at the age of 55. 1547: Francis I dies in the Château de Rambouillet on 31 March at the age of 52. 1547: Edward VI becomes King of England and Ireland on 28 January and is crowned on 20 February at the age of 9. 1547: Emperor Charles V decisively dismantles the Schmalkaldic League at the Battle of Mühlberg. 1547: Grand Prince Ivan the Terrible is crowned tsar of (All) Russia, thenceforth becoming the first Russian tsar. 1548: Battle of Uedahara: Firearms are used for the first time on the battlefield in Japan, and Takeda Shingen is defeated by Murakami Yoshikiyo. 1548: Askia Daoud, who reigned from 1548 to 1583, establishes public libraries in Timbuktu (in present-day Mali). 1548: The Ming dynasty government of China issues a decree banning all foreign trade and closes down all seaports along the coast; these Hai jin laws came during the Wokou wars with Japanese pirates. 1549: Tomé de Sousa establishes Salvador in Bahia, north-east of Brazil. 1549: Arya Penangsang with the support of his teacher, Sunan Kudus, avenges the death of Raden Kikin by sending an envoy named Rangkud to kill Sunan Prawoto by Keris Kyai Satan Kober (in present-day Indonesia). The Islamic gunpowder empires: Mughal Army artillerymen during the reign of Jalaluddin Akbar 1550: The architect Mimar Sinan builds the Süleymaniye Mosque in Istanbul. 1550: Mongols led by Altan Khan invade China and besiege Beijing. 1550–1551: Valladolid debate concerning the human rights of the Indigenous people of the Americas. 1551: Fifth outbreak of sweating sickness in England. John Caius of Shrewsbury writes the first full contemporary account of the symptoms of the disease. 1551: North African pirates enslave the entire population of the Maltese island Gozo, between 5,000 and 6,000, sending them to Libya. 1552: Russia conquers the Khanate of Kazan in central Asia. 1552: Jesuit China Mission, Francis Xavier dies. 1553: Mary Tudor becomes the first queen regnant of England and restores the Church of England under Papal authority. 1553: The Portuguese found a settlement at Macau. 1554: Missionaries José de Anchieta and Manuel da Nóbrega establishes São Paulo, southeast Brazil. 1554: Princess Elizabeth is imprisoned in the Tower of London upon the orders of Mary I for suspicion of being involved in the Wyatt rebellion. 1555: The Muscovy Company is the first major English joint stock trading company. 1556: Publication in Venice of Delle Navigiationi et Viaggi (terzo volume) by Giovanni Battista Ramusio, secretary of Council of Ten, with plan La Terra de Hochelaga, an illustration of the Hochelaga.[13] 1556: The Shaanxi earthquake in China is history's deadliest known earthquake during the Ming dynasty. 1556: Georgius Agricola, the "Father of Mineralogy", publishes his De re metallica. 1556: Akbar defeats Hemu at the Second battle of Panipat. 1556: Russia conquers the Astrakhan Khanate. 1556–1605: During his reign, Akbar expands the Mughal Empire in a series of conquests (in the Indian subcontinent).Political map of the world in 1556 1556: Mir Chakar Khan Rind captures Delhi with Humayun. 1556: Pomponio Algerio, radical theologian, is executed by boiling in oil as part of the Roman Inquisition. 1557: Habsburg Spain declares bankruptcy. Philip II of Spain had to declare four state bankruptcies in 1557, 1560, 1575 and 1596. 1557: The Portuguese settle in Macau (on the western side of the Pearl River Delta across from present-day Hong Kong). 1557: The Ottomans capture Massawa, all but isolating Ethiopia from the rest of the world. 1558: Elizabeth Tudor becomes Queen Elizabeth I at age 25. 1558–1603: The Elizabethan era is considered the height of the English Renaissance. 1558–1583: Livonian War between Poland, Grand Principality of Lithuania, Sweden, Denmark and Russia. 1558: After 200 years, the Kingdom of England loses Calais to France. 1559: With the Peace of Cateau Cambrésis, the Italian Wars conclude. 1559: Sultan Hairun of Ternate (in present-day Indonesia) protests the Portuguese's Christianisation activities in his lands. Hostilities between Ternate and the Portuguese. The Mughal Emperor Akbar shoots the Rajput warrior Jaimal during the Siege of Chittorgarh in 1567 1560: Ottoman navy defeats the Spanish fleet at the Battle of Djerba. 1560: Elizabeth Bathory is born in Nyirbator, Hungary. 1560: By winning the Battle of Okehazama, Oda Nobunaga becomes one of the pre-eminent warlords of Japan. 1560: Jeanne d'Albret declares Calvinism the official religion of Navarre. 1560: Lazarus Church, Macau 1561: Sir Francis Bacon is born in London. 1561: The fourth battle of Kawanakajima between the Uesugi and Takeda at Hachimanbara takes place. 1561: Guido de Bres draws up the Belgic Confession of Protestant faith. 1562: Mughal emperor Akbar reconciles the Muslim and Hindu factions by marrying into the powerful Rajput Hindu caste. 1562–1598: French Wars of Religion between Catholics and Huguenots. 1562: Massacre of Wassy and Battle of Dreux in the French Wars of Religion. 1562: Portuguese Dominican priests build a palm-trunk fortress which Javanese Muslims burned down the following year. The fort was rebuilt from more durable materials and the Dominicans commenced the Christianisation of the local population.[12] 1563: Plague outbreak claimed 80,000 people in Elizabethan England. In London alone, over 20,000 people died of the disease. 1564: Galileo Galilei born on February 15 1564: William Shakespeare baptized 26 April 1565: Deccan sultanates defeat the Vijayanagara Empire at the Battle of Talikota. 1565: Mir Chakar Khan Rind dies at aged 97. 1565: Estácio de Sá establishes Rio de Janeiro in Brazil. 1565: The Hospitallers, a Crusading Order, defeat the Ottoman Empire at the siege of Malta (1565). 1565: Miguel López de Legazpi establishes in Cebu the first Spanish settlement in the Philippines starting a period of Spanish colonization that would last over three hundred years. 1565: Spanish navigator Andres de Urdaneta discovers the maritime route from Asia to the Americas across the Pacific Ocean, also known as the tornaviaje. 1565: Royal Exchange is founded by Thomas Gresham. 1566: Suleiman the Magnificent, ruler of the Ottoman Empire, dies on September 7, during the battle of Szigetvar.Siege of Valenciennes during the Dutch War of Independence in 1567 1566–1648: Eighty Years' War between Spain and the Netherlands. 1566: Da le Balle Contrade d'Oriente, composed by Cipriano de Rore. 1567: After 45 years' reign, Jiajing Emperor died in the Forbidden City, Longqing Emperor ascended the throne of Ming dynasty. 1567: Mary, Queen of Scots, is imprisoned by Elizabeth I. 1568: The Transylvanian Diet, under the patronage of the prince John Sigismund Zápolya, the former king of Hungary, inspired by the teachings of Ferenc Dávid, the founder of the Unitarian Church of Transylvania, promulgates the Edict of Torda, the first law of freedom of religion and of conscience in the World. 1568–1571: Morisco Revolt in Spain. 1568–1600: The Azuchi-Momoyama period in Japan. 1568: Hadiwijaya sent his adopted son and son in-law Sutawijaya, who would later become the first ruler of the Mataram dynasty of Indonesia, to kill Arya Penangsang. 1569: Rising of the North in England. 1569: Mercator 1569 world map published by Gerardus Mercator. 1569: The Polish–Lithuanian Commonwealth is created with the Union of Lublin which lasts until 1795. 1569: Peace treaty signed by Sultan Hairun of Ternate and Governor Lopez De Mesquita of Portugal. The Battle of Lepanto 1570: Ivan the Terrible, tsar of Russia, orders the massacre of inhabitants of Novgorod. 1570: Pope Pius V issues Regnans in Excelsis, a papal bull excommunicating all who obeyed Elizabeth I and calling on all Catholics to rebel against her. 1570: Sultan Hairun of Ternate (in present-day Indonesia) is killed by the Portuguese.[12] Babullah becomes the next Sultan. 1570: 20,000 inhabitants of Nicosia in Cyprus were massacred and every church, public building, and palace was looted. Cyprus fell to the Ottoman Turks the following year. 1571: Pope Pius V completes the Holy League as a united front against the Ottoman Turks, responding to the fall of Cyprus to the Ottomans. 1571: The Spanish-led Holy League navy destroys the Ottoman Empire navy at the Battle of Lepanto. 1571: Crimean Tatars attack and sack Moscow, burning everything but the Kremlin. 1571: American Indians kill Spanish missionaries in what would later be Jamestown, Virginia. 1571: Spanish conquistador Miguel López de Legazpi establishes Manila, Philippines as the capital of the Spanish East Indies. 1572: Brielle is taken from Habsburg Spain by Protestant Watergeuzen in the Capture of Brielle, in the Eighty Years' War. 1572: Spanish conquistadores apprehend the last Inca leader Tupak Amaru at Vilcabamba, Peru, and execute him in Cuzco. 1572: Jeanne d'Albret dies aged 43 and is succeeded by Henry of Navarre. 1572: Catherine de' Medici instigates the St. Bartholomew's Day massacre which takes the lives of Protestant leader Gaspard de Coligny and thousands of Huguenots. The violence spreads from Paris to other cities and the countryside. 1572: First edition of the epic The Lusiads of Luís Vaz de Camões, three years after the author returned from the East.[14] 1572: The 9 years old Taizi, Zhu Yijun ascended the throne of Ming dynasty, known as Wanli Emperor. 1573: After heavy losses on both sides the siege of Haarlem ends in a Spanish victory.St. Bartholomew's Day massacre of French Protestants 1574: in the Eighty Years' War the capital of Zeeland, Middelburg declares for the Protestants. 1574: After a siege of 4 months the siege of Leiden ends in a comprehensive Dutch rebel victory. 1575: Oda Nobunaga finally captures Nagashima fortress. 1575: Following a five-year war, the Ternateans under Sultan Babullah defeated the Portuguese. 1576: Tahmasp I, Safavid shah, dies. 1576: The Battle of Haldighati is fought between the ruler of Mewar, Maharana Pratap and the Mughal Empire's forces under Emperor Akbar led by Raja Man Singh. 1576: Sack of Antwerp by badly paid Spanish soldiers. 1577–1580: Francis Drake circles the world. 1577: Ki Ageng Pemanahan built his palace in Pasargede or Kotagede. 1578: King Sebastian of Portugal is killed at the Battle of Alcazarquivir. 1578: The Portuguese establish a fort on Tidore but the main centre for Portuguese activities in Maluku becomes Ambon.[12] 1578: Sonam Gyatso is conferred the title of Dalai Lama by Tumed Mongol ruler, Altan Khan. Recognised as the reincarnation of two previous Lamas, Sonam Gyatso becomes the third Dalai Lama in the lineage.[15] 1578: Governor-General Francisco de Sande officially declared war against Brunei in 1578, starting the Castilian War of 1578. 1579: The Union of Utrecht unifies the northern Netherlands, a foundation for the later Dutch Republic. 1579: The Union of Arras unifies the southern Netherlands, a foundation for the later states of the Spanish Netherlands, the Austrian Netherlands and Belgium.The Irish Gaelic chieftain's feast, from The Image of Ireland 1579: The British navigator Sir Francis Drake passes through Maluku and transit in Ternate on his circumnavigation of the world. The Portuguese establish a fort on Tidore but the main centre for Portuguese activities in Maluku becomes Ambon.[16] The fall of Spanish Armada 1580: Drake's royal reception after his attacks on Spanish possessions influences Philip II of Spain to build up the Spanish Armada. English ships in Spanish harbours are impounded. 1580: Spain unifies with Portugal under Philip II. The struggle for the throne of Portugal ends the Portuguese Empire. The Spanish and Portuguese crowns are united for 60 years, i.e. until 1640. 1580–1587: Nagasaki comes under control of the Jesuits. 1581: Dutch Act of Abjuration, declaring abjuring allegiance to Philip II of Spain. 1581: Bayinnaung dies at the age of 65. 1582: Oda Nobunaga commits seppuku during the Honnō-ji Incident coup by his general, Akechi Mitsuhide. 1582: Pope Gregory XIII issues the Gregorian calendar. The last day of the Julian calendar was Thursday, 4 October 1582 and this was followed by the first day of the Gregorian calendar, Friday, 15 October 1582 1582: Yermak Timofeyevich conquers the Siberia Khanate on behalf of the Stroganovs. 1583: Denmark builds the world's first theme park, Bakken. 1583: Death of Sultan Babullah of Ternate. 1584–1585: After the siege of Antwerp, many of its merchants flee to Amsterdam. According to Luc-Normand Tellier, "At its peak, between 1510 and 1557, Antwerp concentrated about 40% of the world trade...It is estimated that the port of Antwerp was earning the Spanish crown seven times more revenues than the Americas."[17] 1584: Ki Ageng Pemanahan died. Sultan Pajang raised Sutawijaya, son of Ki Ageng Pemanahan as the new ruler in Mataram, titled "Loring Ngabehi Market" (because of his home in the north of the market). 1585: Akbar annexes Kashmir and adds it to the Kabul SubahPortuguese fusta in India from a book by Jan Huygen van Linschoten 1585: Colony at Roanoke founded in North America. 1585–1604: The Anglo-Spanish War is fought on both sides of the Atlantic. 1587: Mary, Queen of Scots is executed by Elizabeth I. 1587: The reign of Abbas I marks the zenith of the Safavid dynasty. 1587: Troops that would invade Pajang Mataram Sultanate storm ravaged the eruption of Mount Merapi. Sutawijaya and his men survived. 1588: Mataram into the kingdom with Sutawijaya as Sultan, titled "Senapati Ingalaga Sayidin Panatagama" means the warlord and cleric Manager Religious Life. 1588: England repulses the Spanish Armada. 1589: Spain repulses the English Armada. 1589: Catherine de' Medici dies at aged 69. Abu'l-Fazl ibn Mubarak presenting Akbarnama to Mughal Azam Akbar, Mughal miniature 1590: Siege of Odawara: the Go-Hojo clan surrender to Toyotomi Hideyoshi, and Japan is unified. 1591: Gazi Giray leads a huge Tatar expedition against Moscow. 1591: In Mali, Moroccan forces of the Sultan Ahmad al-Mansur led by Judar Pasha defeat the Songhai Empire at the Battle of Tondibi. 1592–1593: John Stow reports 10,675 plague deaths in London, a city of approximately 200,000 people. 1592–1598: Korea, with the help of Ming dynasty China, repels two Japanese invasions. 1593–1606: The Long War between the Habsburg monarchy and the Ottoman Turks. 1594: St. Paul's College, Macau, founded by Alessandro Valignano. 1595: First Dutch expedition to Indonesia sets sail for the East Indies with two hundred and forty-nine men and sixty-four cannons led by Cornelis de Houtman.[18] 1596: Birth of René Descartes. 1596: June, de Houtman's expedition reaches Banten the main pepper port of West Java where they clash with both the Portuguese and Indonesians. It then sails east along the north coast of Java losing twelve crew to a Javanese attack at Sidayu and killing a local ruler in Madura.[18] 1597: Romeo and Juliet is published. 1597: Cornelis de Houtman's expedition returns to the Netherlands with enough spices to make a considerable profit.[18] 1598: The Edict of Nantes ends the French Wars of Religion. 1598: Abbas I moves Safavids capital from Qazvin to Isfahan in 1598. 1598–1613: Russia descends into anarchy during the Time of Troubles. 1598: The Portuguese require an armada of 90 ships to put down a Solorese uprising.[12] (to 1599) 1598: More Dutch fleets leave for Indonesia and most are profitable.[18]Edo period screen depicting the Battle of Sekigahara 1598: The province of Santa Fe de Nuevo México is established in Northern New Spain. The region would later become a territory of Mexico, the New Mexico Territory in the United States, and the US State of New Mexico. 1598: Death of Toyotomi Hideyoshi, known as the unifier of Japan. 1599: The Mali Empire is defeated at the Battle of Jenné. 1599: The van Neck expedition returns to Europe. The expedition makes a 400 per cent profit.[18] (to 1600) 1599: March, Leaving Europe the previous year, a fleet of eight ships under Jacob van Neck was the first Dutch fleet to reach the ‘Spice Islands’ of Maluku.[18] 1600: Giordano Bruno is burned at the stake for heresy in Rome.Siege of Fiľakovo castle during the Long Turkish War 1600: Battle of Sekigahara in Japan. End of the Warring States period and beginning of the Edo period. 1600: The Portuguese win a major naval battle in the bay of Ambon.[19] Later in the year, the Dutch join forces with the local Hituese in an anti-Portuguese alliance, in return for which the Dutch would have the sole right to purchase spices from Hitu.[19] 1600: Elizabeth I grants a charter to the British East India Company beginning the English advance in Asia. 1600: Michael the Brave unifies the three principalities: Wallachia, Moldavia and Transylvania after the Battle of Șelimbăr from 1599. For later events, see Timeline of the 17th century. Polybius' The Histories translated into Italian, English, German and French.[20] Mississippian culture disappears. Medallion rug, variant Star Ushak style, Anatolia (modern Turkey), is made. It is now kept at the Saint Louis Art Museum. Hernan Cortes (1485–1547) Henry VIII, (1491–1547) King of England and Ireland Don Fernando Álvarez de Toledo (1507–1582) Suleiman the Magnificent, Sultan of the Ottoman Empire (1520–1566) Ivan IV the Terrible (1530–1584) Oda Nobunaga (1534–1582) Sir Francis Drake (c. 1540 – 1596) Alberico Gentili, (1552–1608) the Father of international law Philip II of Spain, King of Spain (1556–1598) Akbar the Great, Mughal emperor (1556–1605) Related article: List of 16th century inventions. The Columbian Exchange introduces many plants, animals and diseases to the Old and New Worlds. Introduction of the spinning wheel revolutionizes textile production in Europe. The letter J is introduced into the English alphabet. 1500: First portable watch is created by Peter Henlein of Germany.The Iberian Union in 1598, under Philip II, King of Spain and Portugal 1513: Juan Ponce de León sights Florida and Vasco Núñez de Balboa sights the eastern edge of the Pacific Ocean. 1519–1522: Ferdinand Magellan and Juan Sebastián Elcano lead the first circumnavigation of the world. 1519–1540: In America, Hernando de Soto expeditions map the Gulf of Mexico coastline and bays. 1525: Modern square root symbol (√) 1540: Francisco Vásquez de Coronado sights the Grand Canyon. 1541–42: Francisco de Orellana sails the length of the Amazon River. 1542–43: Firearms are introduced into Japan by the Portuguese. 1543: Copernicus publishes his theory that the Earth and the other planets revolve around the Sun 1545: Theory of complex numbers is first developed by Gerolamo Cardano of Italy. 1558: Camera obscura is first used in Europe by Giambattista della Porta of Italy. 1559–1562: Spanish settlements in Alabama/Florida and Georgia confirm dangers of hurricanes and local native warring tribes. 1565: Spanish settlers outside New Spain (Mexico) colonize Florida's coastline at St. Augustine. 1565: Invention of the graphite pencil (in a wooden holder) by Conrad Gesner. Modernized in 1812. 1568: Gerardus Mercator creates the first Mercator projection map. 1572: Supernova SN 1572 is observed by Tycho Brahe in the Milky Way. 1582: Gregorian calendar is introduced in Europe by Pope Gregory XIII and adopted by Catholic countries. c. 1583: Galileo Galilei of Pisa, Italy identifies the constant swing of a pendulum, leading to development of reliable timekeepers. 1585: earliest known reference to the 'sailing carriage' in China. 1589: William Lee invents the stocking frame. 1591: First flush toilet is introduced by Sir John Harrington of England, the design published under the title 'The Metamorphosis of Ajax'. 1593: Galileo Galilei invents a thermometer. 1596: William Barents discovers Spitsbergen. 1597: Opera in Florence by Jacopo Peri. Entertainment in the 16th century ^ a b Modern reference works on the period tend to follow the introduction of the Gregorian calendar for the sake of clarity; thus NASA's lunar eclipse catalogue states "The Gregorian calendar is used for all dates from 1582 Oct 15 onwards. Before that date, the Julian calendar is used." For dates after 15 October 1582, care must be taken to avoid confusion of the two styles. ^ de Vries, Jan (14 September 2009). "The limits of globalization in the early modern world". The Economic History Review. 63 (3): 710–733. CiteSeerX 10.1.1.186.2862. doi:10.1111/j.1468-0289.2009.00497.x. JSTOR 40929823. S2CID 219969360. SSRN 1635517. ^ Singh, Sarina; Lindsay Brown; Paul Clammer; Rodney Cocks; John Mock (2008). Pakistan & the Karakoram Highway. Vol. 7, illustrated. Lonely Planet. p. 137. ISBN 978-1-74104-542-0. Retrieved 23 August 2010. ^ Babur (2006). Babur Nama. Penguin Books. p. vii. ISBN 978-0-14-400149-1. ^ "16th Century Timeline (1501 to 1600)". fsmitha.com. Archived from the original on February 3, 2009. ^ "History of Smallpox – Smallpox Through the Ages" Archived 2019-09-24 at the Wayback Machine. Texas Department of State Health Services. ^ Ricklefs (1991), p.23 ^ "A LIST OF NATIONAL EPIDEMICS OF PLAGUE IN ENGLAND 1348–1665". Archived from the original on 2009-05-08. Retrieved 2009-04-25. ^ a b Ricklefs (1991), page 24 ^ The Sweating Sickness. Story of London.. Accessed 2009-04-25. Archived 2009-05-03. ^ Sandra Arlinghaus. "Life Span of Suleiman the Magnificent 1494–1566". Personal.umich.edu. Retrieved 2013-05-05. ^ a b c d e Ricklefs (1991), page 25 ^ "La Terra De Hochelaga – Jaques Cartier a Hochelaga". jacquescarter.org. Archived from the original on December 23, 2008. ^ "The Lusiads". World Digital Library. 1800–1882. Retrieved 2013-08-31. ^ Schwieger, Peter (2014). The Dalai Lama and the Emperor of China: a political history of the Tibetan institution of reincarnation. New York: Columbia University Press. ISBN 9780231538602. OCLC 905914446. ^ Miller, George, ed. (1996). To The Spice Islands and Beyond: Travels in Eastern Indonesia. New York: Oxford University Press. pp. xv. ISBN 967-65-3099-9. ^ Luc-Normand Tellier (2009). "Urban world history: an economic and geographical perspective". PUQ. p.308. ISBN 2-7605-1588-5 ^ a b c d e f Ricklefs (1991), page 27 ^ a b Ricklefs (1991), page 28 ^ Polybius: The Rise Of The Roman Empire, Page 36, Penguin, 1979. Langer, William. An Encyclopedia of World History (5th ed. 1973); highly detailed outline of events online free Media related to 16th century at Wikimedia Commons Timelines of 16th century events, science, culture and persons Retrieved from " 4 The following pages link to 16th century External tools (link count transclusion count sorted list) · See help page for transcluding these entries Showing 50 items. View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Bagpipes (links | edit) List of decades, centuries, and millennia (links | edit) Fashion (links | edit) Giovanni Boccaccio (links | edit) History of Mali (links | edit) History of Mauritius (links | edit) Post office (links | edit) Snare drum (links | edit) Republican Party (United States) (links | edit) 20th century (links | edit) 15th century (links | edit) 17th century (links | edit) 18th century (links | edit) 1624 (links | edit) 1626 (links | edit) 1642 (links | edit) 1661 (links | edit) 1608 (links | edit) 1492 (links | edit) 14th century (links | edit) 1st century (links | edit) 13th century (links | edit) 4th century (links | edit) 12th century (links | edit) 11th century (links | edit) 1564 (links | edit) 1648 (links | edit) 1572 (links | edit) 1623 (links | edit) 1662 (links | edit) 1490s (links | edit) 1640s (links | edit) 1597 (links | edit) 1690 (links | edit) 1688 (links | edit) 7th century (links | edit) 10th century (links | edit) 9th century (links | edit) 8th century (links | edit) 6th century (links | edit) 5th century (links | edit) 3rd century (links | edit) 2nd century (links | edit) 1573 (links | edit) 1570s (links | edit) 1574 (links | edit) 1436 (links | edit) 1476 (links | edit) 1542 (links | edit) 1540s (links | edit) View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500) Retrieved from " WhatLinksHere/16th_century" Financial projection models are essential tools used by businesses to identify future cash flows and evaluate current investments. These models allow businesses to understand their own financial situation and determine whether or not they have sufficient resources to open a new market or finance a major project. Financial projection models are used to project future financial performance based on historic trends, current market conditions and specific assumptions about the company. There are a number of different types of financial projection models that businesses can use to analyze their financial position and make long-term decisions. These models range from simple cash flow models to more complex models that incorporate financial statements like income statements, balance sheets, and statements of cash flow. Overview of the Different Types of Financial Projections Models In general, there are four main types of financial projection models: Cash Flow Model Break-even Analysis Discounted Cash Flow Model Financial Ratios Model Cash Flow Projections A Cash Flow Projection is an estimate of how much money a company will receive from its sales and other sources, and how much money it will be spending on its costs, taxes, and investments. It is an important tool to help a business plan their spending and manage resources including capital investments. What is a Cash Flow Projection? A Cash Flow Projection is a forecast of a company’s expected cash inflow and outflows over a certain period. It is a type of financial projection that helps to understand the future financial health of a business, as well as provide insight into changes in operations and investments. Cash flow projections also help businesses understand their overall financial position to decide what investments they can make, what risks they may face, and how they should manage their finances to meet their goals. Key Elements of a Cash Flow Projection A cash flow projection should consider the various components of a business’s finances, such as operating activities, capital expenditures, investments, financing activities, and taxes. It should also consider the various sources of cash for a business, such as sales, debt, and investments. Finally, it should also consider the various expenses associated with running a business, such as salaries, overhead costs, rent, and taxes. Operating activities: Include income from sales, operations, and cost of goods sold. Capital expenditures: Include investments in assets, such as equipment, real estate, and furniture. Investments: Include investments in stocks, bonds, and other financial instruments. Financing activities: Include activities such as loans, debt repayment, and issuing debt. Taxes: Include sales taxes, payroll taxes, and income taxes. Sales: Includes income from sales of products and services. Debt: Includes loans and financing activities. Investments: Includes investments in stocks, bonds, and other financial instruments. Expenses: Include salaries, overhead costs, rent, and taxes. Ratio Analysis Ratio analysis is a technique used to analyze financial statements and compare a company’s performance over time. It involves comparing different financial metrics to each other to get an indication of a company’s financial health and stability. Ratio analysis also assists in examining trends in the company’s financial performance. Key Ratios Used to Analyze Financial Statements The following ratios can be used to analyze financial statements: Liquidity Ratios: These ratios measure a company's ability to pay its short-term debt using its current assets. Activity Ratios: These ratios measure how efficiently a company is using its resources to generate sales. Profitability Ratios: These ratios measure how profitable a company is relative to its assets and liabilities. Coverage Ratios: These ratios measure a company's ability to cover its current liabilities with its current assets. Valuation Ratios: These ratios measure a company's value relative to its assets, liabilities, and earnings. These ratios provide an overall picture of a company's financial performance and can be used to compare a company's performance with that of its industry peers. Additionally, ratio analysis can be used to detect potential problems in a company's financials that may require further investigation. Breakeven Analysis Breakeven analysis (BEA) is an important financial projection tool that helps entrepreneurs and investors understand their profitability before committing to a business venture. It helps calculate the point of break-even when revenues will exceed their costs and thus become profitable. What is Breakeven Analysis? Breakeven analysis is a financial tool that helps calculate the points at which total revenue from sales equals total costs of operations. This is the point where a business venture or project breaks even and can start to generate profits. Breakeven analysis relies on a number of assumptions, such as fixed costs, variable costs, and sales price, to illustrate the breakeven point and its profitability. How Does Breakeven Analysis Help with Financial Projections? Breakeven analysis is a useful tool for entrepreneurs and investors alike to understand a business venture’s profitability and understand the key drivers that will determine a successful financial performance. It helps them plan and make projections accordingly. By providing the necessary data and assumptions, breakeven analysis can assess a product’s profitability before the venture is launched. Breakeven analysis also allows companies to test different scenarios. For example, if a company increases its sales price, it can run a simuatio to understand the impact on profitability. Knowing the breakeven point on projects and investments allows companies to understand their potential for growth and the risk of failure, providing an invaluable insight that helps make informed decisions. Industry Average Comparison Financial projections models vary across different industries and businesses. It is important for individual businesses to determine the performance of their operations relative to other businesses within their respective industry. One method to do this is known as industry average comparison, which involves comparing one’s business to the average performance of all businesses in the industry. The intent is to ascertain whether a certain business is performing above or below the industry average in key metrics such as profitability, revenues, and expenses. What is Industry Average Comparison? Industry average comparison is an objective method of analyzing the performance of one’s business relative to the industry at large. It can be used to benchmark one’s performance with other firms. The idea is to identify those areas where one’s business is outperforming or underperforming the rest of the industry, which in turn can help identify areas for improvement. In addition, industry average comparison can also help in developing more reliable financial projections since it can provide more accurate representations of future performance as compared to one’s own business trends. By taking the average of all businesses within the industry, the forecasted performance is much less prone to the effects of outliers. Examples of Profitability Metrics Used in an Industry Average Comparison The specific profitability metrics used for industry average comparison vary across industries and businesses. Generally, the following metrics are used to compare the performance of a business to its industry’s average: Gross Profit Margin Operating Profit Margin Net Profit Margin Return on Assets (ROA) Return on Equity (ROE) Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) For example, if a business had a gross profit margin of 40%, but the industry average was 45%, then it would be an indication that the business was not performing as well as other businesses in the industry. This would be an important insight to take into account when forecasting future performance. Reverse Sensitivity Analysis Reverse sensitivity analysis is a financial projection model used to assess the value of a new project or potential business decisions. This type of analysis provides insights into current and future decision-making, allowing for risk mitigation, predictive forecasting, and a clear overview of the best path forward. What Is Reverse Sensitivity Analysis? Reverse sensitivity analysis is a form of financial risk analysis focusing on uncertainty of inputs and their effects on end values. It's a ways of evaluating the hypothetical impacts of various inputs in a financial model to see how results could vary with different inputs. Reverse sensitivity analysis typically allows a user to specify different variables, such as cost or revenue, and observe how changes in each variable would impact the end value of a project. This type of analysis is especially helpful to identify the different risk drivers associated with a business or project. Key Elements of a Reverse Sensitivity Analysis Reverse sensitivity analysis consists of three key elements: assumptions, outputs, and analysis. First, the assumptions, or inputs, must be determined, such as project costs and revenue expectations. From there, the outputs can be determined - typically the expected total return from a project or certain milestones. Lastly, the analysis should be completed to assess how changes in each variable would affect the outputs and the expected total return. The analysis phase involves making explanatory notes about how each variable impacts the end results. For example, an increase in cost forone variable may lead to a decrease in return or vice versa. This helps to identify which variables have the greatest impacts on the results of theproject or decision-making process. Reverse sensitivity analysis is a useful tool for investigating the risks and rewards associated with a project or decision. It is an important tool for both current and future decision-making processes and can help to identify potential risks associated with a business. Conclusion In conclusion, financial projections models provide powerful tools for entrepreneurs to create strategic business plans and make better financial decisions. These models can be used to make predictions about a company's future financial performance, while also helping to identify potential growth opportunities. It is important to choose the right model for your business to maximize its impact. Overall Overview of Financial Projections Models Financial projections models are used to forecast a company's future financial performance and to identify potential growth opportunities based on past and current trends. Common models include the cash flow statement, PAT (profit and loss) statement, balance sheets, break-even analysis, sensitivity analysis, and scenario analysis. Each model is used for different purposes, and understanding their individual functions can be helpful when planning for a company's long-term financial success. How to Choose a Financial Projection Model for Your Business Choosing the right financial projection model for your business requires careful consideration of your business’s individual needs. For example, if you need to gain insight into your company's potential growth opportunities, then a break-even analysis may be the best model to use. If you are looking to understand the effects of certain business decisions on profitability, then a sensitivity analysis may be beneficial. Ultimately, the choice of model should depend on the individual needs of the business. It is also important to remember that financial projections models rely on past trends and financial data. As such, it is necessary to regularly update the models with the latest information to ensure they remain accurate and reflective of the company's current state. By taking the time to select the most appropriate financial projection model and regularly updating it, you can ensure your business is well equipped to make smart financial decisions and achieve long-term success.