



Building Financial Modelling using Code and No-Code Platforms

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Contents

- Introduction and Course Objectives
- What is Financial Modelling
- Uses of Financial Models
- Financial Modelling Tools
- Deciding on Financial Modelling Tools
- Conclusion

Facilitator Profile

Temitayo is a Senior Consultant in the Data & Analytics arm of the Advisory service line at EY Nigeria. He specializes in Data & Analytics topics, including Data Architecture, Engineering, AI and Machine Learning. He has over 9 years' experience across Software Development, RPA, Business Process Optimization, Data Engineering and Data Science & Analytics



Temitayo Ajadi

Senior Consultant in Data & Analytics

EY

Temitayo.ajadi@ng.ey.com

Introduction and Course Objectives

Introduction and Course Objectives



Introduction

The Institute of Chartered Accounts of Nigeria (ICAN) is holding its annual Information Technology conference and the theme for this year's seminar is '**DATA SCIENCE AND ACCOUNTING PROFESSION**'.

Several topics relating to the above theme will be discussed, one of which is '**BUILDING FINANCIAL MODELLING USING CODE AND NO-CODE PLATFORMS**'. The world is becoming more and more data-driven, with endless amounts of data available to work with. This topic discusses how data can be analyzed to gain insights into improving the social welfare of Nigerians and the world at large.

Objective

The objectives of this course are:

1. To learn about Financial models
2. To leverage code and no-code platforms to build financial models.
3. To determine the platform best suited to build financial models.

What is Financial Modelling

Let's begin by defining what 'Model' and 'Finance' directly from Oxford dictionary:

'Model', in the context of a design, is a thing used as an example to follow or imitate.

'Finance' can be defined as the management of large amounts of money, especially governments or large companies.

With the above definitions, we can define **Financial modeling** as the process of estimating the financial performance of a project or business by considering all relevant factors, growth and risk assumptions, and interpreting their impact. It enables the user to acquire a concise knowledge of all the variables involved in financial forecasting.

Who builds Financial Models

● Investment Bankers

● Equity Research Analysts

● Credit Analysts

● Risk Analysts

● Data Analysts

● Portfolio Managers

● Investors

● Management/Entrepreneurs

The background of the slide is a photograph of three stacks of gold-colored coins on a wooden surface. The stacks are arranged in a row, increasing in height from left to right. The background is blurred, showing a white wall and a dark object.

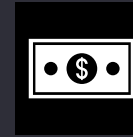
Uses of Financial Models

Uses of Financial Models



Capital Allocation

Maximize profit through distribution and investing of company's financial resources



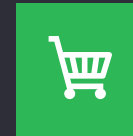
Raising Capital

Raising of funds through external resources (e.g. investors)



Risk Management

Identifying, accessing and controlling threats to a company's capital and earnings



Company Valuation

Determining the economic value of a business



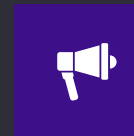
Asset Valuation

Determining the current value of the company's assets (e.g. stocks, buildings, goodwill)



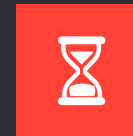
Mergers and Acquisitions

Consolidation or absorption of companies or their major assets



Option Pricing

Using variables to calculate the theoretical value of an option



Budget and Forecasting

Planned business expenses or outcome and revenue over a period

Steps for Good Financial Model



Business and intent understanding

- What is the business
- How does it make money
- Why is Financial Modelling being done

Assumptions

- Deal construct
- Projections and growth rates
- Financing
- Synergies

Preparing Headers and Formulas

- This is standardized and changes on situational variables

Build it

- That all depends on making the right assumptions, a sound understanding of the business correctly, making it look believable and achievable

Types of Financial Models

DISCOUNTED CASH FLOW MODEL

- The most used Financial Model
- Based on the theory that the value of a business is sum of its expected future free cash flows discounted at an appropriate rate

SUM-OF-THE-PARTS MODEL

- Also referred to as the breakup model
- Involves valuation of a company by determining the value of its divisions if they were broken down and spun off or if they were acquired by another company

OPTION PRICING MODEL

- Utilizes different option price models to set current theoretical value
- Use certain fixed knowns in the present and also forecasts for factors like implied volatility

COMPARATIVE COMPANY ANALYSIS MODEL

- Used in Investment Banking
- Compare financial metrics of a company against similar firms in the industry

MERGER & ACQUISITION MODEL

- Shows clients the impact of an acquisition to the acquirer's EPS
- Shows how the new EPS compares with the status quo

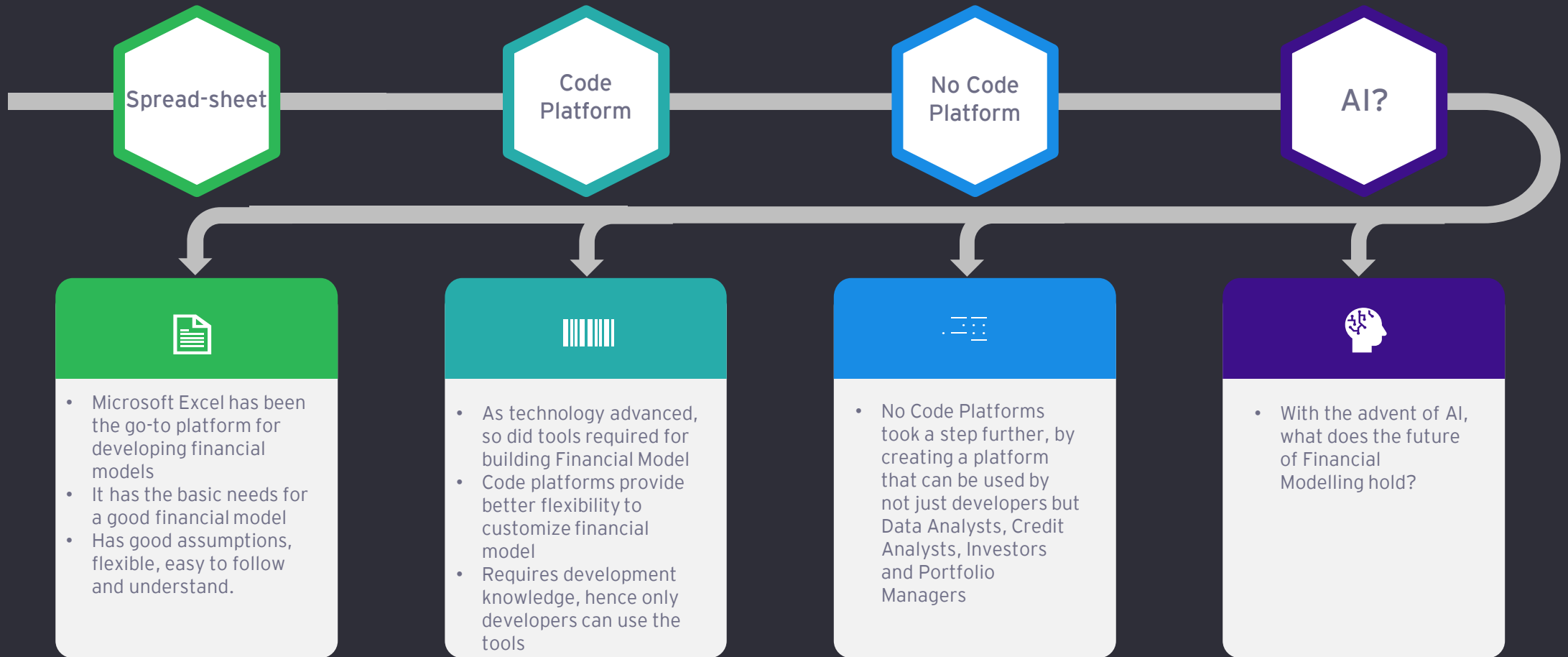
LEVERAGED BUY OUT MODEL

- Acquiring another company using borrowed funds to meet acquisition cost
- Used usually in leveraged finance at bulge-bracket investment banks



Financial Modelling Tools

Evolution of Financial Modelling Tools



Financial Models using Code Platforms

Python

Coding language for financial modeling using libraries including numpy and SciPy

- Contains essential libraries
- Speeds up financial activities
- Has an easy-to-read code syntax
- Easy integration with third party platforms
- Has smooth learning curve
- Has in-built test automation

- Requires coding knowledge
- No multi-threading
- Requires huge computation resources

R

Coding language for statistical analysis and tools for data manipulation and modeling

- Contains essential libraries
- Can run on multiple Operating Systems
- Has tools to create eye catching reports

- Requires coding knowledge
- Complicated language to learn
- Slow speed when running

Matlab

programming and numeric computing platform used to analyze data and create models

- Has a Graphical User Interface for development
- Contains essential libraries
- Ease of use

- Slow speed when running
- High cost to acquire

Financial Models using No-Code Platform

Airtable

Airtable combines spreadsheet, database, and kanban functionality within one platform

- Cost depends on user usage
- Has easy collaboration within teams
- Allows users to organize, analyze, and visualize data
- Has user-friendly interface and drag-and-drop tools to build financial models

- Not fully customizable
- Cannot be used to create complex financial models

Zapier

Zapier provides users with a visual interface and drag-and-drop tools to build financial models

- Allows integration with other platforms
- Has user-friendly interface and drag to drop tools
- Operating Systems

- Complex Financial Models are harder to debug

Bubble

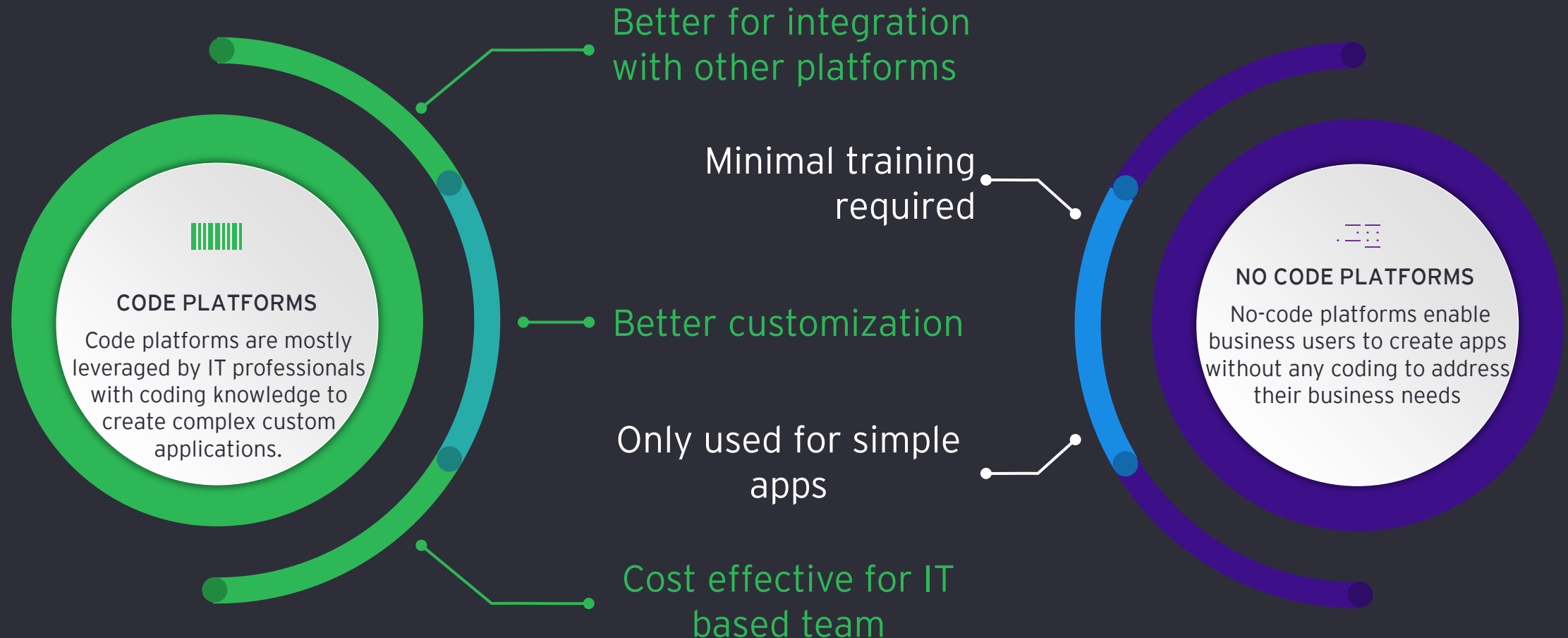
It provides users with a drag-and-drop interface and a visual editor to build financial models

- Economical
- Agile
- Enhanced productivity
- Has user-friendly interface and drag to drop tools

- Limited customization
- There is a learning curve
- Cannot be used to build complex financial models

Deciding on Financial Modelling Tool

COMPARISON BETWEEN CODE AND NON-CODE PLATFORMS



Conclusion





Financial modeling software makes it easy to create accurate financial forecasts—without having to wade through incomprehensible mounds of data.

Even the most straightforward business models require financial models to prepare for the future. Running out of cash would be disastrous for any business—be it a driveway lemonade stand or a massive global enterprise.

Q & A

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