

# Project Specification: Intrinsic Value Calculator Suite

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## 1. Project Overview & Vision

### 1.1. Project Name: Intrinsic Value Calculator Suite

**1.2. Vision Statement:** To create a powerful, personal, web-based application that provides a comprehensive, multi-model intrinsic valuation of any publicly traded company. The tool will empower users to move beyond simple metrics by fetching live financial data, visualizing historical and projected trends, and saving their analyses to a secure, personal account to track their investment theses over time.

### 1.3. Core Objectives:

- **Efficiency:** Automate the retrieval of financial data via a ticker symbol.
- **Depth:** Allow for the normalization of historical data to minimize anomalies.
- **Foresight:** Enable scenario-based forecasting (Bull, Base, Bear) for key financial metrics.
- **Visualization (New):** Provide interactive charts to visualize key historical and projected financial data.
- **Comprehensiveness:** Offer four distinct intrinsic valuation calculators: DCF, DDM, NAV, and EPV.
- **Clarity:** Present valuation results in a clear, comparative summary view.
- **Control:** Provide user-adjustable inputs to tailor the analysis.
- **Persistence:** Allow users to create an account, log in, and save their complete valuation analyses.

## 2. Core Features & Functionality

### 2.1. Main Dashboard / Ticker Input

(Unchanged)

### 2.2. Financial Data Hub

Upon fetching data, the user is taken to a central hub for the selected company. This hub will contain the raw data, normalization tools, projection inputs, and new visual components.

#### 2.2.1. Financial Visualization (New)

To provide immediate visual context, the Financial Data Hub will feature interactive line charts for the key metrics relevant to each valuation model.

- **Chart Structure:** The charts will display the last 10 years of historical data (as a solid line) and the 10-year projection (as a dashed line).
- **Dynamic Projections:** The projected portion of the chart will dynamically update

when the user switches between **Bull**, **Base**, and **Bear** scenarios.

- **Key Charts:**

- **Free Cash Flow Chart:** Displays historical and projected FCF, directly relevant to the **DCF calculator**.
- **Dividends per Share Chart:** Displays historical and projected dividends, relevant to the **DDM calculator**.
- **Earnings Chart:** Displays historical and projected Revenue and Operating Earnings, relevant to the **EPV calculator**.
- **Balance Sheet Chart:** Displays historical Total Assets vs. Total Liabilities, relevant to the **NAV calculator**.

## 2.3. Valuation Calculator Modules

(Unchanged)

## 2.4. Valuation Summary Page

(Unchanged)

## 2.5. User Account Management

(Unchanged)

## 2.6. Saved Valuations Dashboard

(Unchanged)

# 3. Technical Specifications

## 3.1. Data Source

The application will use the Financial Modeling Prep (FMP) API.

## 3.2. Technology Stack

- **Frontend:** A modern JavaScript framework like **React** or **Vue.js**.
- **UI Components:** A component library like Material-UI, Ant Design, or Shadcn/UI.
- **Charting:** **Recharts** or a similar library will be used to create interactive and responsive line charts as specified in section 2.2.1.
- **Backend:** A server-side framework is **required**. **Node.js with Express** is a strong candidate.
- **Database:** A database is **required**. **Firebase Firestore** is highly recommended.
- **Authentication:** **Firebase Authentication** is recommended.

# 4. Design & User Interface (UI)

(Unchanged)

# 5. User Experience (UX) Flow

(Unchanged)