

---

# BALANCE SHEET

# BUILDING AND ANALYSIS

---

IDS 331: Business Analysis Using Spreadsheets

---

By Team Balance Sheet Builders

Kaity | Ngoc Ngan Ha Le

## **0. Amazon Consolidated Balance Sheet**

### **1. Introduction**

**1.1 Problem Description:** Financial documents are often dense and complex, making it difficult for those unfamiliar with them to understand. To address this problem we will be using Amazon's various financial documents and consolidating them into a single balance sheet accompanied with various formulas and visualizations for easier digestion. This will allow for those to analyze and draw conclusions from the data with more accuracy.

→ Source of the problem: We have acquired and compiled data from Yahoo Financial and Amazon's Annual Report.

→ Current issues and problems: While working on the project, we found that financial documents can be complex and hard to understand. Most financial documents do not offer insight to the health and financial status of the company. Because of this, we decided it would be better to shift our focus to consolidating the data from the reports to create a general and more user-friendly interface.

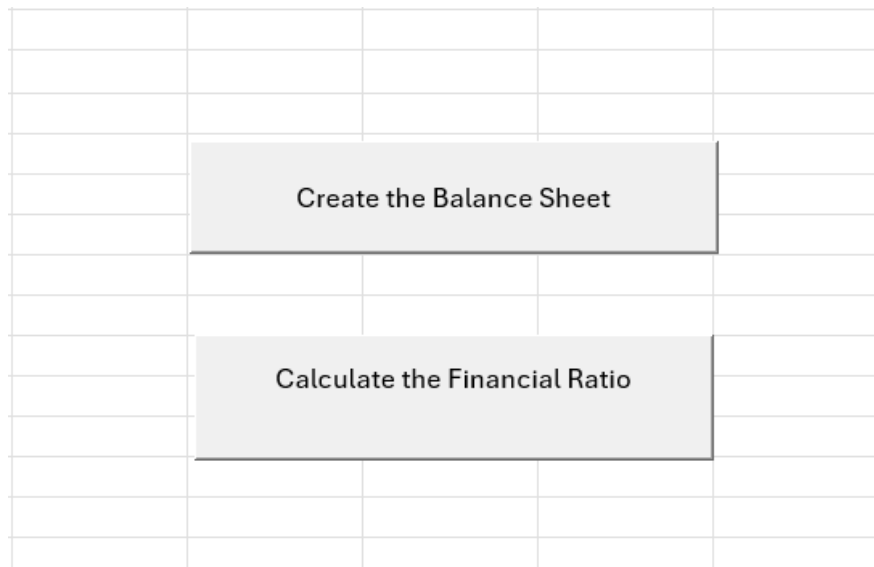
**1.2 Objectives:** Simplify Amazon's financial documents into a single comprehensive balance sheet. Present the data in a user-friendly format paired with visualizations. Use formulas to break down the data. These objectives align with our goal of making the financial documents approachable and useful for those without a background in finance.

**2. Approaches/Analysis:** Our approach to making a consolidated balance sheet was to use the generalized accounting equation,  $\text{assets} = \text{liabilities} + \text{equity}$ . To create the balance sheet, this would require generating the Assets, Liabilities, and Equity ledgers. From there we can apply formulas that will tell us Amazon's liquidity ratio, debt to equity ratio, and breakdown earnings. The balance sheet would be accompanied with visualizations from various charts and graphs we generated to allow for comparison of the company's performance between fiscal years.

**2.1. Procedures:**

→ First we had to find Amazon's financial records from the fiscal year end of 2020 - 2023. Once the data was found, it was then imported into Excel for data processing and cleaning. From there we realized that there was a lot of bulk information that would not be very helpful for a simple and easy to understand balance sheet.

→ Once we had decided what information to use, we created two buttons. Button one, would automate the data entry process from the raw data to a more simplified balance sheet. This was all done through the backend with VBA, where we created functions that utilized VLOOKUP to populate the new sheet.



	12/31/2023	12/31/2022	12/31/2021	12/31/2020
<b>Total Assets</b>	<b>\$ 527,854,000.00</b>	<b>\$ 462,675,000.00</b>	<b>\$ 420,549,000.00</b>	<b>\$ 321,195,000.00</b>
Current Assets	\$ 172,351,000.00	\$ 146,791,000.00	\$ 161,580,000.00	\$ 132,733,000.00
Cash And Cash Equivalents	\$ 73,387,000.00	\$ 53,888,000.00	\$ 36,220,000.00	\$ 42,122,000.00
Inventory	\$ 33,318,000.00	\$ 34,405,000.00	\$ 32,640,000.00	\$ 23,795,000.00
Total non-current assets	\$ 355,503,000.00	\$ 315,884,000.00	\$ 258,969,000.00	\$ 188,462,000.00
Net PPE	\$ 276,690,000.00	\$ 252,838,000.00	\$ 216,363,000.00	\$ 150,667,000.00
<b>Total Liabilities Net Minority Interest</b>	<b>\$ 325,979,000.00</b>	<b>\$ 316,632,000.00</b>	<b>\$ 282,304,000.00</b>	<b>\$ 227,791,000.00</b>
Current Liabilities	\$ 164,917,000.00	\$ 155,393,000.00	\$ 142,266,000.00	\$ 126,385,000.00
Long Term Debt	\$ 58,314,000.00	\$ 67,150,000.00	\$ 48,744,000.00	\$ 31,816,000.00
Stockholders' Equity	\$ 201,875,000.00	\$ 146,043,000.00	\$ 138,245,000.00	\$ 93,404,000.00
Retained Earnings	\$ 113,618,000.00	\$ 83,193,000.00	\$ 85,915,000.00	\$ 52,551,000.00
<b>Total Liabilities &amp; Equity</b>	<b>\$ 2,303,806,000.00</b>	<b>\$ 2,034,892,000.00</b>	<b>\$ 1,823,795,000.00</b>	<b>\$ 1,390,921,000.00</b>

```

Sub CreateSimplifiedBalanceSheet()
    Dim wsInput As Worksheet
    Dim wsBalanceSheet As Worksheet
    Dim yearHeaders As Range
    Dim currentRow As Long

    ' Set worksheets
    Set wsInput = ThisWorkbook.Sheets("Input Data")
    Set wsBalanceSheet = ThisWorkbook.Sheets.Add
    wsBalanceSheet.Name = "Balance Sheet"
    wsBalanceSheet.Move After:=ThisWorkbook.Sheets(ThisWorkbook.Sheets.Count)

    ' Copy year headers from Input Data (B3:E3) to Balance Sheet
    Set yearHeaders = wsInput.Range("B3:E3")
    wsBalanceSheet.Range("B1:E1").Value = yearHeaders.Value

    ' Define categories to be used for VLOOKUP
    Dim categories As Variant
    categories = Array( _
        "Total Assets", "Current Assets", "Cash And Cash Equivalents", _
        "Inventory", "Total non-current assets", "Net PPE", _
        "Total Liabilities Net Minority Interest", "Current Liabilities", _
        "Long Term Debt", "Stockholders' Equity", "Retained Earnings", _
        "Total Liabilities & Equity" _
    )

    ' Populate the categories in column A
    Dim i As Long
    currentRow = 2
    For i = LBound(categories) To UBound(categories)
        wsBalanceSheet.Cells(currentRow, 1).Value = categories(i)
        currentRow = currentRow + 1
    Next i

    ' Add VLOOKUP formulas for financial data (Columns B to E)
    Dim colOffset As Long
    For colOffset = 2 To 5 ' Columns B to E (2 to 5 in Excel terms)
        For i = 2 To currentRow - 1
            wsBalanceSheet.Cells(i, colOffset).Formula = "=VLOOKUP(A" & i & ", 'Input Data'!A:E, " & colOffset & ", FALSE)"
        Next i
    Next colOffset

```

→ Button two was used to create Financial ratios. We decided on the use of common financial ratios because they can be used to quickly determine the health or status of a company's liquidity, working capital, and debt-to-equity.

	12/31/2023	12/31/2022	12/31/2021	12/31/2020
<b>Current Ratio</b>	1.05	0.94	1.14	1.05
<b>Quick Ratio</b>	0.65	0.57	0.48	0.52
<b>Working Capital</b>	7434000	-8602000	19314000	6348000
<b>Debt-to-Equity Ratio</b>	1.61	2.17	2.04	2.44
<b>Solvency Ratio</b>	0	0	0	0

## 2.2. Software Used:

Excel, VBA

## 3. Conclusions/Findings

**3.1 Results:** Our results show that Amazon is in good financial health. Through all of the ratios we have seen we can draw different conclusions about each section.

→ Current ratio is a measure of whether or not a company can pay its short-term debts with their short-term assets. Quick ratio is similar to the current ratio but utilizes the most liquid assets instead of short-term. Current and quick ratios can be measured from -1 to +1. -1 standing meaning the company has more liabilities than assets and +1 meaning that there are more assets than liabilities.

→ Working capital ratio measures the difference between current assets and current liabilities, positive figures mean the company has enough assets to cover its short-term debts and negative mean they do not have enough assets to cover its liabilities.

→ Debt to equity ratio compares the total debt to its shareholders' equity. A ratio closer to 0 shows that a company is less reliant on debt for financing.

→ Solvency ratio indicates a company's ability to meet long term obligations. Higher ratios suggest better solvency.

From the results we can gain quick insights on the health and status of Amazon's standings. Amazon is able to cover their short-term liabilities with their short-term assets from the current ratio. However, we can see from their quick ratio that since it is not the same, about half of their short-term assets are not as liquid. Over the fiscal years Amazon had a good working capital ratio except for the year end of 2022. We don't have enough information from just the balance sheet to determine the cause but the company was able to turn it around the following fiscal year. Amazon's debt-to-equity ratio in this range of fiscal years has been great as it has maintained at least a 1.5+ ratio.

## Reference

Amazon's Balance Sheet

<https://finance.yahoo.com/quote/AMZN/balance-sheet/>