**Unit 4**

**Assignment**

1. **Given below are details of values of 3 stock market indices, India, Japan and the USA. Based on the values available - create a table with the details represented in an error free format, calculate statistical parameters for the indices - such as returns and risk, and represent the relative movement in the form of a chart**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Date** | **Nifty** |  | **Date** | **Nikkei** |  | **Date** | **Dow Jones** |
| 1/4/2010 | 5232.2 |  | 1/4/2010 | 10654.79 |  | 1/4/2010 | 10583.96 |
| 1/5/2010 | 5277.9 |  | 1/5/2010 | 10681.83 |  | 1/5/2010 | 10572.02 |
| 1/6/2010 | 5281.8 |  | 1/6/2010 | 10731.45 |  | 1/6/2010 | 10573.68 |
| 1/7/2010 | 5263.1 |  | 1/7/2010 | 10681.66 |  | 1/7/2010 | 10606.86 |
| 1/8/2010 | 5244.75 |  | 1/8/2010 | 10798.32 |  | 1/8/2010 | 10618.19 |
| 1/11/2010 | 5249.4 |  | 1/12/2010 | 10879.14 |  | 1/11/2010 | 10663.99 |
| 1/12/2010 | 5210.4 |  | 1/13/2010 | 10735.03 |  | 1/12/2010 | 10627.26 |
| 1/13/2010 | 5233.95 |  | 1/14/2010 | 10907.68 |  | 1/13/2010 | 10680.77 |
| 1/14/2010 | 5259.9 |  | 1/15/2010 | 10982.1 |  | 1/14/2010 | 10710.55 |
| 1/15/2010 | 5252.2 |  | 1/18/2010 | 10855.08 |  | 1/15/2010 | 10609.65 |
| 1/18/2010 | 5274.85 |  | 1/19/2010 | 10764.9 |  | 1/18/2010 | #N/A |
| 1/19/2010 | 5225.65 |  | 1/20/2010 | 10737.52 |  | 1/19/2010 | 10725.43 |
| 1/20/2010 | 5221.7 |  | 1/21/2010 | 10868.41 |  | 1/20/2010 | 10603.15 |
| 1/21/2010 | 5094.15 |  | 1/22/2010 | 10590.55 |  | 1/21/2010 | 10389.88 |
| 1/22/2010 | 5036 |  | 1/25/2010 | 10512.69 |  | 1/22/2010 | 10172.98 |

1. **Given below are details of financials of a company's various subsidiaries. The subsidiaries operate in different business segments, and you are supposed to represent the data in the best possible manner so as to derive meaningful information out of this**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Subsidiary 1 - Foods and Beverages |  |  |  |  |  |  |
|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Sales | 950 | 1044 | 1200 | 1300 | 1280 | 1331 |
| Operating Profits | 123 | 125 | 144 | 169 | 179 | 159 |
| Net Profit | 60 | 67 | 72 | 73 | 77 | 74 |
| Marketing Expenses | 150 | 170 | 200 | 210 | 223 | 187 |
| Market Share in segment | 2.20% | 2.40% | 2.50% | 2.40% | 2.30% | 2.40% |
|  |  |  |  |  |  |  |
| Subsidiary 2 - Media |  |  |  |  |  |  |
|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Sales | 670 | 740 | 800 | 900 | 1100 | 990 |
| Operating Profits | 13 | 15 | 16 | 14 | 21 | 19 |
| Net Profit | -10 | -15 | -20 | -43 | -25 | -24 |
| Marketing Expenses | 200 | 250 | 300 | 350 | 400 | 384 |
| Market Share in segment | 10.00% | 11.00% | 12.00% | 11.00% | 12.50% | 11.00% |
|  |  |  |  |  |  |  |
| Subsidiary 3 - Infrastructure |  |  |  |  |  |  |
|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Sales | 7680 | 8000 | 7569 | 7430 | 6900 | 7935 |
| Operating Profits | 376 | 392 | 454 | 409 | 338 | 298 |
| Net Profit | 200 | 187 | 227 | 178 | 144 | 133 |
| Marketing Expenses | 900 | 800 | 1023 | 1090 | 1200 | 1044 |
| Market Share in segment | 5.00% | 5.00% | 6.00% | 6.50% | 7.20% | 8.00% |
|  |  |  |  |  |  |  |
| Subsidiary 4 - Cement |  |  |  |  |  |  |
|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Sales | 1600 | 1700 | 2000 | 1900 | 1800 | 1818 |
| Operating Profits | 272 | 323 | 360 | 380 | 342 | 294 |
| Net Profit | 139 | 166 | 189 | 165 | 190 | 194 |
| Marketing Expenses | 80 | 80 | 100 | 100 | 100 | 94 |
| Market Share in segment | 3.40% | 3.60% | 4.00% | 4.00% | 4.50% | 4.20% |

1. **Given below are details of financials of a company's various subsidiaries. The subsidiaries operate in different business segments, and you are supposed to represent the data in the best possible manner so as to derive meaningful information and perform a Dashboard.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Subsidiary 1 - Foods and Beverages |  |  |  |  |  |  |
|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Sales | 950 | 1044 | 1200 | 1300 | 1280 | 1331 |
| Operating Profits | 123 | 125 | 144 | 169 | 179 | 159 |
| Net Profit | 60 | 67 | 72 | 73 | 77 | 74 |
| Marketing Expenses | 150 | 170 | 200 | 210 | 223 | 187 |
| Market Share in segment | 2.20% | 2.40% | 2.50% | 2.40% | 2.30% | 2.40% |
|  |  |  |  |  |  |  |
| Subsidiary 2 - Media |  |  |  |  |  |  |
|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Sales | 670 | 740 | 800 | 900 | 1100 | 990 |
| Operating Profits | 13 | 15 | 16 | 14 | 21 | 19 |
| Net Profit | -10 | -15 | -20 | -43 | -25 | -24 |
| Marketing Expenses | 200 | 250 | 300 | 350 | 400 | 384 |
| Market Share in segment | 10.00% | 11.00% | 12.00% | 11.00% | 12.50% | 11.00% |
|  |  |  |  |  |  |  |
| Subsidiary 3 - Infrastructure |  |  |  |  |  |  |
|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Sales | 7680 | 8000 | 7569 | 7430 | 6900 | 7935 |
| Operating Profits | 376 | 392 | 454 | 409 | 338 | 298 |
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| Market Share in segment | 5.00% | 5.00% | 6.00% | 6.50% | 7.20% | 8.00% |
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| Subsidiary 4 - Cement |  |  |  |  |  |  |
|  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Sales | 1600 | 1700 | 2000 | 1900 | 1800 | 1818 |
| Operating Profits | 272 | 323 | 360 | 380 | 342 | 294 |
| Net Profit | 139 | 166 | 189 | 165 | 190 | 194 |
| Marketing Expenses | 80 | 80 | 100 | 100 | 100 | 94 |
| Market Share in segment | 3.40% | 3.60% | 4.00% | 4.00% | 4.50% | 4.20% |

4. **Given below are some data points about a person. Create a simple financial plan for the person, and comment whether he is able to meet his financial goals. He would want to purchase the home with a 50:50 loan and personal money usage. He would like to check if a loan tenure of 15 years is feasible. Also, based on the life expectancy of 80 years, what is the return requirement? What asset allocation would you recommend, and what insurance cover should he take today?**

|  |  |
| --- | --- |
| Age | 32 |
| Retirement Age | 60 |
| Monthly expenses | 75,000 |
| Expected Salary Increase | 10% |
| Expected inflation | 8% |
| Current Net Savings | 4,000,000 |
|  |  |
| **Major Financial Goals** |  |
| Buy a House in 2020 | 8,500,000 |
| Kid's higher education in 2025 | 4,000,000 |
| Kid's wedding in 2030 | 1,500,000 |
|  |  |
| Interest Rate on home loans | 10% |
|  |  |
| **Asset Classes Returns** |  |
|  |  |
| Equities | 15% |
| Debt | 8% |
| Real Estate | 10% |

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