• By Henrick Ondigo
Contents

1. Understanding Financial Statements
2. Business Forecasting, Profitability & Cash Flow Management
UNDERSTANDING FINANCIAL STATEMENTS

A SEED AND ENTERPRISE INSTITUTE (SEMIs) COURSE PRESENTATION.

BY

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SCHOOL OF BUSINESS, UoN

JULY 2015
OBJECTIVES

• At the end of the presentation, you should:
• Explain the functions and importance of accounting, and identify the three basic activities involving accounting
• Discuss Why you need financial statements
• State What financial statements you need
• Discuss how financial ratios are used to analyze a company’s financial strengths and weaknesses.
• Describe the role of budgets in a business.
• Appreciate the need for understanding financial statements
Accounting is the process of measuring, interpreting, and communicating financial information to support internal and external business decision making.
Users of accounting information

Figure 16.1

Users of Accounting Information

<table>
<thead>
<tr>
<th>Users</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners, Stockholders,</td>
<td>To Evaluate Operations of the Firm</td>
</tr>
<tr>
<td>Potential Investors, Creditors</td>
<td>To Make Investment Decisions</td>
</tr>
<tr>
<td>Management</td>
<td>To Plan and Control</td>
</tr>
<tr>
<td>Employees, Union Officials</td>
<td>To Use in Contract Negotiations</td>
</tr>
<tr>
<td>Lenders, Suppliers</td>
<td>To Evaluate Credit Ratings</td>
</tr>
<tr>
<td>Government Agencies, Economic Planners,</td>
<td>To Evaluate Tax Liabilities</td>
</tr>
<tr>
<td>Consumer Groups</td>
<td>To Approve New Issues of Stocks and Bonds</td>
</tr>
</tbody>
</table>
Business Activities Involving Accounting

- **Financing** activities provide necessary funds to start a business and expand it after it begins operating.

- **Investing** activities provide valuable assets required to run a business.

- **Operating** activities focus on selling goods and services, but they also consider expenses as important elements of sound financial management.
The Accounting Cycle

- **Accounting process** – set of activities involved in converting information about transactions into financial statements
Figure 16.2 The Accounting Cycle

**Basic Data**

Transactions
Receipts, invoices, and other source documents related to each transaction are assembled to justify making an entry in the firm’s accounting records.

**Processing**

Record
Transactions are recorded, usually electronically, in chronological order in books called journals, along with a brief explanation for each entry.

Classify
Journal entries are transferred, or posted, usually electronically, to individual accounts kept in a ledger. All entries involving cash are brought together in the ledger’s cash account; all entries involving sales are recorded in the ledger’s sales account.

Summarize
All accounts in the ledger are summarized at the end of the accounting period, and financial statements are prepared from these account summaries.

Financial Statements
- Balance Sheet
- Income Statement
- Statement of Owners’ Equity
- Statement of Cash Flows
Why you Need Financial Statements

- Applying for loans
  - Start-up loans, operating loans/lines, etc.
  - Typical loan application ("loan app")
    - 2-3 years of balance sheets, income statements
      - Historical, projected
  - Impress your lender with:
    - Cash flow statement and breakevens
    - Best/worst case scenarios
Why you Financial Statements cont..

- Powerful management tools
  - Compare the business to the industry averages
  - Identify strengths/weaknesses of the business
  - Identify trends within the business
  - Identify strategies to improve
  - Enterprise analysis

- Helps with tax preparation
  - Improved recordkeeping
The Accounting Terminologies

- **Assets** - anything of value owned or leased by a business.
- **Liability** - claim against a firm’s assets by a creditor.
- **Owner’s equity** - all claims of the proprietor, partners, or stockholders against the assets of a firm, equal to the excess of assets over liabilities.
- **Basic accounting equation** - relationship that states that assets equal liabilities plus owners’ equity.
- **Double-entry bookkeeping** - process by which accounting transactions are entered; each individual transaction always has an offsetting transaction.
The Main Financial Statements

- Balance sheet/Statement of financial position
  - Listing of what you own and how you paid for it
    - Assets = Liabilities + Net Worth
    - Value of Assets = Debt financing + “Owner financing”
  - Tells lender
    - Liquidity and solvency position
    - Outstanding debts, creditors
    - Assets available for collateral
  - Not a useful day-to-day tool for managers
 Balance Sheet - Statement of Financial position

✓ **Balance sheet (Statement of Financial Position)** - statement of a firm’s financial position—what it owns and the claims against its assets—at a particular point in time.

✓ Photograph of firm’s assets together with its liabilities and owner’s equity

✓ Follows the accounting equation
Balance Sheet cont...

- Assets = Value of things used in the business
  - Only what you have that day!!
  - Current Assets = life of about 1 year or less
    - Cash, savings, inventory, A/Rec., prepaid, supplies, etc.
  - Non-current Assets = life greater than 1 year
    - Machinery, equipment, real estate, improvements
  - List each at its purchase cost
    - Lenders want market value instead!
Balance Sheet cont...

- **Liabilities** = what you owe as of that day
  - **Current Liabilities** = owed within 1 year
    - Operating loan, A/Pay., principal due, accrued interest
  - **Non-current liabilities** = owed AFTER 1 year
    - Remaining principal balances
  - List the actual dollar amount owed as of that day

- **Net Worth** = owner’s investment as of that day
  - Original cash invested − withdrawals + additions
  - Retained Earnings ~ net income from previous years
### Sample Balance Sheet/Statement of Financial position

#### Diane's Java Balance Sheet (Fiscal Year, Ending December 31)

<table>
<thead>
<tr>
<th>Assets</th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>$ 800</td>
<td>$ 600</td>
</tr>
<tr>
<td>Short-term investments</td>
<td>1,250</td>
<td>940</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>990</td>
<td>775</td>
</tr>
<tr>
<td>Inventory</td>
<td>2,200</td>
<td>1,850</td>
</tr>
<tr>
<td>Total current assets</td>
<td>5,240</td>
<td>4,165</td>
</tr>
<tr>
<td><strong>Plant, property, and equipment (net)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goodwill and other intangible assets</td>
<td>3,300</td>
<td>2,890</td>
</tr>
<tr>
<td>Total Assets</td>
<td>8,790</td>
<td>7,305</td>
</tr>
</tbody>
</table>

#### Liabilities and Shareholders' Equity

<table>
<thead>
<tr>
<th>Liabilities and Shareholders' Equity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accruals</td>
<td>$ 350</td>
<td>$ 450</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>980</td>
<td>900</td>
</tr>
<tr>
<td>Notes payable</td>
<td>700</td>
<td>500</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>2,030</td>
<td>1,850</td>
</tr>
<tr>
<td><strong>Long-term debt</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>1,100</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Shareholders' equity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Liabilities and Equity</td>
<td>5,660</td>
<td>4,455</td>
</tr>
</tbody>
</table>

**Total**                                     | 8,790  | 7,305  |
### Example Company Balance Sheet
#### 31-Dec-14

#### ASSETS

<table>
<thead>
<tr>
<th>Current Assets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$ 2,100</td>
</tr>
<tr>
<td>Petty Cash</td>
<td>100</td>
</tr>
<tr>
<td>Temporary Investments</td>
<td>10,000</td>
</tr>
<tr>
<td>Accounts Receivable - net</td>
<td>40,500</td>
</tr>
<tr>
<td>Inventory</td>
<td>31,000</td>
</tr>
<tr>
<td>Supplies</td>
<td>3,800</td>
</tr>
<tr>
<td>Prepaid Insurance</td>
<td>1,500</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>89,000</td>
</tr>
</tbody>
</table>

| Investments                    | 36,000   |
| Property, Plant & Equipment    |          |
| Land                           | 5,500    |
| Land Improvements              | 6,500    |
| Buildings                      | 180,000  |
| Equipment                      | 201,000  |
| Less: Accum Depreciation       | (56,000) |
| Prop, Plant & Equip - net      | 337,000  |

| Intangible Assets              |          |
| Goodwill                       | 105,000  |
| Trade Names                    | 200,000  |
| Total Intangible Assets        | 305,000  |

| Other Assets                   | 3,000    |

#### LIABILITIES

<table>
<thead>
<tr>
<th>Current Liabilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes Payable</td>
<td>$ 5,000</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>35,900</td>
</tr>
<tr>
<td>Wages Payable</td>
<td>8,500</td>
</tr>
<tr>
<td>Interest Payable</td>
<td>2,900</td>
</tr>
<tr>
<td>Taxes Payable</td>
<td>6,100</td>
</tr>
<tr>
<td>Warranty Liability</td>
<td>1,100</td>
</tr>
<tr>
<td>Unearned Revenues</td>
<td>1,500</td>
</tr>
<tr>
<td>Total Current Liabilities</td>
<td>61,000</td>
</tr>
</tbody>
</table>

| Long-term Liabilities          |          |
| Notes Payable                  | 20,000   |
| Bonds Payable                  | 400,000  |
| Total Liabilities              | 481,000  |

| Intangible Assets              |          |
| Goodwill                       | 105,000  |
| Trade Names                    | 200,000  |
| Total Intangible Assets        | 305,000  |

| Other Assets                   | 3,000    |

#### STOCKHOLDERS' EQUITY

| Common Stock                   | 110,000  |
| Retained Earnings              | 229,000  |
| Less: Treasury Stock           | (50,000) |
| Total Stockholders' Equity     | 289,000  |

| Total Assets                   | $770,000 |
| Total Liab. & Stockholders' Equity | $770,000 |
The Financial Statements

- **Income Statement**
  - Shows the economic profit for the period (year)
    - Revenues – COGS – Overhead = EBT
  - Cash vs accrual accounting
  - Lenders & managers use to assess:
    - Profitability, Repayment ability, and Financial efficiency
    - Breakevens, sensitivity analysis
  - Retail operations usually do a weekly income statements
The following example shows some of the common elements of the Income Statement (also known as a Profit and Loss Statement).
<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td></td>
</tr>
<tr>
<td>Gross Sales</td>
<td>346,400</td>
</tr>
<tr>
<td>Less returns and allowances</td>
<td>1,000</td>
</tr>
<tr>
<td>Net Sales</td>
<td>345,400</td>
</tr>
<tr>
<td><strong>Cost of Goods</strong></td>
<td></td>
</tr>
<tr>
<td>Merchandise Inventory, January 1</td>
<td>160,000</td>
</tr>
<tr>
<td>Purchases</td>
<td>90,000</td>
</tr>
<tr>
<td>Freight Charges</td>
<td>2,000</td>
</tr>
<tr>
<td>Total Merchandise available for sale</td>
<td>252,000</td>
</tr>
<tr>
<td>Less Inventory, December 31</td>
<td>100,000</td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>152,000</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>193,400</td>
</tr>
<tr>
<td>Interest Income</td>
<td>500</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>193,900</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>68,250</td>
</tr>
<tr>
<td>Utilities</td>
<td>5,800</td>
</tr>
<tr>
<td>Rent</td>
<td>23,000</td>
</tr>
<tr>
<td>Office Supplies</td>
<td>2,250</td>
</tr>
<tr>
<td>Insurance</td>
<td>3,900</td>
</tr>
<tr>
<td>Advertising</td>
<td>8,650</td>
</tr>
<tr>
<td>Telephone</td>
<td>2,700</td>
</tr>
<tr>
<td>Travel and Entertainment</td>
<td>2,550</td>
</tr>
<tr>
<td>Dues &amp; Subscriptions</td>
<td>1,100</td>
</tr>
<tr>
<td>Interest Paid</td>
<td>2,140</td>
</tr>
<tr>
<td>Repairs &amp; Maintenance</td>
<td>1,250</td>
</tr>
<tr>
<td>Taxes &amp; Licenses</td>
<td>11,700</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>133,290</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>$60,110</td>
</tr>
</tbody>
</table>
Statement Changes in of Owner’s Equity

✓ Statement of Owner’s Equity - is designed to show the components of the change in equity from the end of one fiscal year to the end of the next.

✓ Begins with the amount of equity shown on the balance sheet.

✓ Net income is added, and cash dividends paid to owners are subtracted.
**Figure 16.5**
Diane’s Java Simplified Statement of Owners’ Equity (Fiscal Year Ending December 31)

1. From the prior year’s balance sheet.

2. From the current year’s income statement.

3. Amount should equal the figure shown on the current year’s balance sheet.

---

### Diane’s Java
Simplified Statement of Owners’ Equity

<table>
<thead>
<tr>
<th>($ thousands)</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholders’ equity (beginning of year)</td>
<td>$4,445</td>
</tr>
<tr>
<td>Add net income</td>
<td>1,917</td>
</tr>
<tr>
<td>Subtract cash dividends</td>
<td>(450)</td>
</tr>
<tr>
<td>Add sale of new shares</td>
<td>0</td>
</tr>
<tr>
<td>Subtract repurchase of existing shares</td>
<td>(262)</td>
</tr>
<tr>
<td>Equals shareholders’ equity (end of year)</td>
<td>5,660</td>
</tr>
</tbody>
</table>
The Statement of Cash Flows

- The statement of cash flows reports on the company’s cash movements during the period(s) classifying them according to three activities:
  - Operating,
  - Investing and
  - Financing
Sample Statement of Cash Flows

Diane's Java Statement of Cash Flows (Fiscal Year Ending December 31)

Operating Activities: The nuts and bolts of day-to-day activities of a company carrying out its regular business; increases in accounts receivable and inventory are uses of cash, while increases in accruals and accounts payables are sources of cash; in financially healthy firms, net cash flow from operating activities should be positive.

Investing Activities: Transactions to accumulate or use cash in ways that affect operating activities in the future; often a use of cash.

Financing Activities: Ways to transfer cash to or from creditors and to or from owners; can be either positive or negative.

Net Cash Flow: The sum of cash flow from operating, investing, and financing activities, a reconciliation of cash from the beginning to the end of the accounting period (one year in this example).

### Diane's Java

<table>
<thead>
<tr>
<th>Statement of Cash Flows</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash Flow from Operating Activities</strong></td>
<td></td>
</tr>
<tr>
<td>Net income</td>
<td>$1,917</td>
</tr>
<tr>
<td>Depreciation</td>
<td>350</td>
</tr>
<tr>
<td>Change in accounts receivable</td>
<td>(215)</td>
</tr>
<tr>
<td>Change in inventory</td>
<td>(350)</td>
</tr>
<tr>
<td>Change in accruals</td>
<td>(100)</td>
</tr>
<tr>
<td>Change in accounts payable</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total cash flow from operating activities</strong></td>
<td>1,682</td>
</tr>
<tr>
<td><strong>Cash Flow from Investing Activities</strong></td>
<td></td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>(760)</td>
</tr>
<tr>
<td>Change in short-term investments</td>
<td>(310)</td>
</tr>
<tr>
<td><strong>Total cash flow from investing activities</strong></td>
<td>(1,070)</td>
</tr>
<tr>
<td><strong>Cash Flow from Financing Activities</strong></td>
<td></td>
</tr>
<tr>
<td>Cash dividends</td>
<td>(450)</td>
</tr>
<tr>
<td>Sale/repurchase of shares</td>
<td>(262)</td>
</tr>
<tr>
<td>Change in notes payable</td>
<td>200</td>
</tr>
<tr>
<td>Change in long-term debt</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total cash flow from financing activities</strong></td>
<td>(412)</td>
</tr>
<tr>
<td><strong>Net Cash Flow</strong></td>
<td></td>
</tr>
<tr>
<td>Cash (beginning of year)</td>
<td>600</td>
</tr>
<tr>
<td>Cash (end of year)</td>
<td>800</td>
</tr>
</tbody>
</table>
Cash Flow Statement (Budget)

- Shows all cash coming in/going out and the timing

- Helps the lender and manager:
  - Estimate cash surplus/deficits for each period
  - Shift the timing of cash flows
  - Determine when to schedule loan payments
  - Determine operating loan needs and terms

- The most powerful statement for managers
Cash Flow budget

- Cash “Budget”
- List cash inflows WHEN they occur
- List cash outflows WHEN they occur
- Bottom half deals with operating loan
  - Thank goodness for computers!
- Helps you do your projected financial statements.
### Birchwood Paper Company

**Four-Month Cash Budget**

<table>
<thead>
<tr>
<th>($) thousands)</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross sales</strong></td>
<td>$1,200.0</td>
<td>$3,200.0</td>
<td>$5,500.0</td>
<td>$4,500.0</td>
</tr>
<tr>
<td>Cash sales</td>
<td>300.0</td>
<td>800.0</td>
<td>1,375.0</td>
<td>1,125.0</td>
</tr>
<tr>
<td>One month prior</td>
<td>600.0</td>
<td>600.0</td>
<td>1,600.0</td>
<td>2,750.0</td>
</tr>
<tr>
<td>Two months prior</td>
<td>300.0</td>
<td>300.0</td>
<td>300.0</td>
<td>800.0</td>
</tr>
<tr>
<td><strong>Total cash inflows</strong></td>
<td>1,200.0</td>
<td>1,700.0</td>
<td>3,275.0</td>
<td>4,675.0</td>
</tr>
</tbody>
</table>

**Purchases**

<table>
<thead>
<tr>
<th></th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash purchases</td>
<td>1,040.0</td>
<td>1,787.5</td>
<td>1,462.5</td>
<td>390.0</td>
</tr>
<tr>
<td>One month prior</td>
<td>390.0</td>
<td>1,040.0</td>
<td>1,787.5</td>
<td>1,462.5</td>
</tr>
<tr>
<td>Wages and salaries</td>
<td>250.0</td>
<td>250.0</td>
<td>250.0</td>
<td>250.0</td>
</tr>
<tr>
<td>Office rent</td>
<td>75.0</td>
<td>75.0</td>
<td>75.0</td>
<td>75.0</td>
</tr>
<tr>
<td>Marketing and other expenses</td>
<td>150.0</td>
<td>150.0</td>
<td>150.0</td>
<td>150.0</td>
</tr>
<tr>
<td>Taxes</td>
<td>300.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total cash outflows</strong></td>
<td>1,905.0</td>
<td>3,602.5</td>
<td>3,725.0</td>
<td>2,327.5</td>
</tr>
</tbody>
</table>

**Net cash flow**

<table>
<thead>
<tr>
<th></th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflows – Outflows</td>
<td>(705.0)</td>
<td>(1,902.5)</td>
<td>(450.0)</td>
<td>2,347.5</td>
</tr>
<tr>
<td>Beginning cash balance</td>
<td>250.0</td>
<td>150.0</td>
<td>150.0</td>
<td>150.0</td>
</tr>
<tr>
<td><strong>Net cash flow</strong></td>
<td>(705.0)</td>
<td>(1,902.5)</td>
<td>(450.0)</td>
<td>2,347.5</td>
</tr>
<tr>
<td>Ending cash balance</td>
<td>(455.0)</td>
<td>(1,752.5)</td>
<td>(300.0)</td>
<td>2,497.5</td>
</tr>
<tr>
<td>Target cash balance</td>
<td>150.0</td>
<td>150.0</td>
<td>150.0</td>
<td>150.0</td>
</tr>
<tr>
<td>Surplus (deficit)</td>
<td>(605.0)</td>
<td>(1,902.5)</td>
<td>(450.0)</td>
<td>2,347.5</td>
</tr>
<tr>
<td>Cumulative surplus (deficit)</td>
<td>(605.0)</td>
<td>(2,507.5)</td>
<td>(2,957.5)</td>
<td>610.0</td>
</tr>
</tbody>
</table>
Ratio Analysis & Benchmarks

- **Ratio analysis** - tool for measuring a firm’s liquidity, profitability, and reliance on debt financing, as well as the effectiveness of management’s resource utilization.

- Compare ratios to benchmarks

- Look for trends over time
  - That’s why lenders want 2-3 years of statements
Ratio Analysis

- Identify strengths and weaknesses
- Develop strategies to improve the financial condition
  - Cost control
  - Pricing
  - Marketing
  - Debt structure
  - Labor efficiency, etc.
Financial Ratios cont...

- **Liquidity** – ability to meet current obligations
  - Current Ratio: \( \frac{\text{current assets}}{\text{current liabilities}} \)
  - Quick Ratio: \( \frac{(\text{current asset} - \text{inventory})}{\text{cur. liab.}} \)

- **Solvency** – ability to meet all debts
  - Debt/Asset: \( \frac{\text{total liabilities}}{\text{total assets}} \)
  - Debt/Worth: \( \frac{\text{total liabilities}}{\text{net worth}} \)
Financial Ratios

- Repayment ability
  - Times Interest earned = \( \frac{EBIT}{Interest} \)
  - Debt Coverage Ratio (DCR) is the ratio of cash available for debt servicing to interest, principal, and lease payments. It is used in the measurement of an entity's (person or corporation) ability to produce enough cash to cover its debt (including lease) payments.
  - \( DCR = \frac{(EBT + \text{other income} + \text{Depreciation} + \text{Interest Expense} - \text{Taxes & Family Living})}{\text{Annual P&I payments}} \)

- Profitability
  - ROA \( = \frac{EBT}{\text{Total Assets}} \)
  - ROE \( = \frac{\text{EAT}}{\text{Net Worth}} \)
Financial Ratios

- Financial Efficiency
  - Sales/Total Assets
  - COGS/Inventory
  - Operating Exp/Sales
  - Operating Profit Margin EBT/Sales
Liquidity Ratios Calculation

- **Current ratio** compares current assets to current liabilities.

\[
\text{Liquidity Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} = \frac{5,240}{2,030} = 2.58
\]
Liquidity Ratios Calculation cont...

- **Acid-test (or quick) ratio** measures the ability of a firm to meet its debt payments on short notice.

\[
\text{Acid-test ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}} = \frac{5,240 - 2,200}{2,030} = 1.50
\]
Activity Ratios

- **Inventory turnover ratio** indicates the number of times merchandise moves through a business.

\[
\text{Inventory Turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{10,380}{[(2,200 + 1,850)/2]} = 5.13
\]
Activity Ratios cont....

- **Total asset turnover ratio** indicates how much in sales each dollar invested in assets generates.

\[
\text{Total asset turnover} = \frac{Sales}{\text{Average total assets}} = \frac{17,300}{[(8,790 + 7,305)/2]} = 2.15
\]
Profitability Ratios

- *Profitability ratios* measure the organization’s overall financial performance by evaluating its ability to generate revenues in excess of operating costs and other expenses.
Profitability Ratios cont....

Gross profit margin = \( \frac{\text{Gross Profit}}{\text{Sales}} = \frac{6,920}{17,300} = 40.0\% \)

Net profit margin = \( \frac{\text{Net income}}{\text{Sales}} = \frac{1,917}{17,300} = 11.1\% \)

Return on equity = \( \frac{\text{Net income}}{\text{Average equity}} = \frac{1,917}{[(5,660 + 4,455)/2]} = 37.9\% \)
Leverage Ratios

Leverage ratios measure the extent to which a firm relies on debt financing.

\[
\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}} = \frac{3,130}{8,790} = 35.6\%
\]

\[
\text{Long-term debt to equity} = \frac{\text{Long-term debt}}{\text{Owners' equity}} = \frac{1,100}{5,660} = 19.64\%
\]
Leverage Ratios cont...

- Total liabilities to total assets ratio > 50 percent indicates that a firm is relying more on borrowed money than owners’ equity.
WHY IT IS IMPORTANT TO UNDERSTAND FINANCIAL STATEMENTS

1. The statements represents the company’s scorecard and present an accurate picture of what happened over the period under review.

2. Should your company wish to obtain outside funding (loans), banks and financial markets require that the audited financial statements be presented for their evaluation as a basis of making credit decisions.
WHY IT IS IMPORTANT TO UNDERSTAND FIN STATEMENTS CONT...

3. The statement provide a basis for planning and benchmarking future performance of the company and signing performance contracts with managers.

4. The tax and regulatory authorities usually require you to fill income tax returns and file the statements.

5. They provide an accurate picture of performance and can be used as a basis of rewarding managers & workers.
6. The financial statements provide a mechanism that managers use to explain to the owners of the company how they have discharged their stewardship responsibility.
END OF PRESENTATION

THANK YOU
BUSINESS FORECASTING, PROFITABILITY & CASH FLOW MANAGEMENT

A SEED AND ENTERPRISE INSTITUTE (SEMIs) COURSE PRESENTATION.

BY

HERICK ONDIGO

SCHOOL OF BUSINESS, UoN

JULY 2015
OVERVIEW OF PRESENTATION

- At the end of the presentation you should be able to understand:
  - Business Forecasting
  - Why manage the Cash flow?
  - Cash Budgeting - Exercise
  - Cash Flow Analysis - Application
  - Cash Flow problems & Possible Solutions
  - Tips for Financial survival
  - Profitability Pitfalls to Avoid or Fix
Business Forecasting is rather like creating a map of where you are trying to go and what the financial steps are to get you there (Strategic Financial Forecasting).

You will often hear that “farming is a lifestyle choice”. However on farms where the farmer needs the land to earn a living, he or she must be a businessman as well as a farmer.

Farming will be very different financially for the next generation compared to how it has been for the past current generation.

Farmers currently operate in a world of high competition, low commodity prices and high input costs.
There are two main tools that you will use in forecasting

- Profitability Budget
- Monthly Cash flow forecast

The Profitability Budget assesses the overall profitability of a proposed enterprise and therefore what level of costs can be incurred.

The Monthly Cash flow forecast attempts to predict the effect on the farms bank or cash balance over the months or year(s).
Why Manage Cash flows?

- In any business the availability of cash when required is critical
- Businesses fail because they run out of available cash, not necessarily because of profitability problems
- As farmer you Must know at all points in time:-
  ✓ How much cash does the farm have available
  ✓ What is the level of unpaid bills and when are they due
  ✓ What cash is the farm owed and when will it be received
Why Manage Cash flows? Cont...

- In farming, cash flow management can be particularly difficult due to the length of time between investment of cash (cash out) and realising a return (cash in)
- Some sectors are easier to predict and manage than others
- Dairy Farming, for example, benefits from a monthly milk cheque that is generally received 30 days after the month in which the milk is produced
- Other Livestock and Arable Farmers however have a much longer period of time between incurring the production costs and seeing sale proceeds come into the bank
Why Manage Cash flow? – Arable Farm-Case in Point

- April 2015 – Winter Foundation Seeds planted. Cash is therefore spent on Seed, Fertiliser and cultivation costs (Cash Out)
- August 2015 to Early December 2015 – various operations including spraying, fertilizing (Cash Out)
- April 2016 – Harvest costs (Cash Out)
- August 2016 to December 2016 – Seeds sold (Cash In)
Business Forecasting and Cash flow Management

- Profitability is dependent on receipt of the Single Farm Payment (therefore it is critical to establish how much will be received each year)
- There are other expenses to be paid out of the budget before a cash surplus/deficit can be established (Salaries, Seedlings, Drawings, Tax, Capital Investment)
- If you are buying machinery, you may need to do some external contracting/financing to cover these payments
- Over the harvest season the enterprises may be profitable but there will be a significant level of working capital to fund from cash that may not be there
Cash Flow Planning- Forecasting

- Cash transactions often occur in Farming
- It is vital to control & manage the flow of cash to ensure the farm generates a positive net cash flow
- Net cash flow = Cash inflows - cash outflows
- Cash flow analysis and forward planning can be applied to new or ongoing activities
Cash Flow Planning- Forecasting

- A farmer must generate enough cash to meet financial obligations as they fall due without disrupting normal operations.
- Cash Flow of a farmer may be affected by:
  - The farm production cycle
  - Cash inflows from product sale (e.g., delay sale for higher prices)
  - Delay in payment from customers
Cash Flow Planning - Forecasting

- Can be achieved through preparation of cash budget:
  - Yearly
  - Quarterly
  - Monthly
  - Weekly
  - Daily
Cash Flow Planning - Forecasting

- Cash Inflows include:
  - Crop and seed sales
  - Other farm receipts
  - Sale of capital assets
  - Non farm receipts
  - Borrowed money
Cash Flow Planning - Forecasting

- Cash Outflows include:
  - Production Expenses
  - Capital expenditures
  - Loan repayments
  - Family living expenditures
Cash Budgeting - Exercise

- Monica and Dan are farmers. Monica earns money from selling cassava while Dan is a fisherman. They have a few chicken and two goats. They have three children attending school. They would like to buy some farm seedlings costing $6,000 and are wondering whether they can afford it and when to make the purchase.
Cash Budgeting - Exercise

- Dan expects to receive $9,400 from the sale of fish as follows:
  - $400 per month in March, April & October
  - $600 per month in Feb, May, Sept & Nov
  - $800 per month in January and December
  - $1,200 per month in June and July
  - $1,800 in August
Cash Budgeting- Exercise

- Monica expects to receive $3,000 from the sale of cassava as follows
  - $300 in January
  - $900 per month in June, July & August
- They expect to sell some small livestock and get:
  - $600 per month in January and December
Cash Budgeting - Exercise

- They need Every month $500 to cover living expenses
- They need school fees as follows:
  - $300 per month in March, June, September & December
- Dan needs money for boat and net repairs:
  - $200 per month in March, May and July
  - $300 in November
Cash Budgeting- Exercise

- Task
- Based on the above information prepare a cash forecast (budget) to indicate whether the farmers can buy the seedlings and if so which month to make the purchase
- Assume the family expects no other sources of cash flows
### Suggested Solution

#### Monica & Dan Farm

**Cash forecasting**

**Prepeared by**

**For the period Jan-Dec 2015**

<table>
<thead>
<tr>
<th>Particulars</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>Total</th>
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<tr>
<td>Sale of Cassava</td>
<td>$ 300</td>
<td></td>
<td></td>
<td>$ 900</td>
<td>$ 900</td>
<td>$ 900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$ 3,000</td>
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<td>Sale of Livestock</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$ 1,200</td>
</tr>
<tr>
<td>Sale of Fish</td>
<td>$ 800</td>
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<td>$ 400</td>
<td>$ 400</td>
<td>$ 600</td>
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<td>$ 1,200</td>
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<td>$ 400</td>
<td>$ 600</td>
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<td><strong>Total Receipts</strong></td>
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<td>$ 400</td>
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<td>$ 13,600</td>
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<td>Living Expenses</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>$ 1,200</td>
</tr>
<tr>
<td>Repair of Boat/Net</td>
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<td>$ 200</td>
<td>$ 200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$ 900</td>
</tr>
<tr>
<td><strong>Total payments</strong></td>
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<td>$ 500</td>
<td>$ 1,000</td>
<td>$ 500</td>
<td>$ 700</td>
<td>$ 800</td>
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<td>$ 800</td>
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<td>$ 800</td>
<td>$ 800</td>
<td>$ 8,100</td>
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<tr>
<td><strong>Surplus (Deficit)</strong></td>
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<td>$ (600)</td>
<td>$ (100)</td>
<td>$ (100)</td>
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<td>$ (100)</td>
<td>$ (200)</td>
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<td>$ 5,500</td>
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<tr>
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<td>$ 1,300</td>
<td>$ 700</td>
<td>$ 600</td>
<td>$ 500</td>
<td>$ 1,800</td>
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<td>$ 5,100</td>
<td>$ 4,900</td>
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</tr>
<tr>
<td><strong>Balance c/f</strong></td>
<td>$1,200</td>
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<td>$ 700</td>
<td>$ 600</td>
<td>$ 500</td>
<td>$ 1,800</td>
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<td>$ 5,200</td>
<td>$ 5,100</td>
<td>$ 4,900</td>
<td>$ 5,500</td>
<td>$ 5,500</td>
</tr>
</tbody>
</table>
Cash flow Analysis Applications

1. To monitor liquidity – ability to meet financial obligations as they fall due

A farmer should keep two cash records

Projected cash flow – prepared at beginning of the period

Actual cash flows – record transactions as they occur – this forms the basis of projection for future period(s)
Cash flow Analysis Applications cont..

- 2. For Farm Planning and Management
- Compare Actual cash flows with Projections to improve management of the farm
- Actual cash flows from year 1 can be used to forecast/project future cash flows
- Consider any other factors that may change
Cash flow Analysis Applications cont...

- 3. To provide solutions to cash shortfalls
- Cash flow analysis can be used to identify cash shortfalls and ways of addressing them; including
  - Borrowing additional funds
  - Mobilizing savings
  - Selling assets
Cash Flow Problems & Possible Solutions

1. **Low Profitability** - this may be a symptom of cash flow problem:
   - **Solution:**
   - Analyze the profitability of each farming unit
   - Increase profits by either:
     - Raising prices or
     - Controlling and lowering costs
Cash Flow Problems & Possible Solutions cont…

2. **Unexpected Cash Problems** - Cash Shortages or Deficits or Surpluses

**Solution**

- Identify the problem before it occurs
- Prepare cash flow forecasts to give you the time to alter the timing of cash inflows and cash outflows
Cash Flow Problems & Possible Solutions cont…

3. Need to Maintain Profitability and Increase Cash flows

Solution

- Careful evaluation of combination of farm produce
- Combining livestock with Arable farming
- Crop rotation
Cash Flow Problems & Possible Solutions cont...

4. High Production Costs

Solution

Cost control

- Using the best seeds and seedling rates
- Fertilization at the right level
- Substitution of commercial fertilizers with manure
- Integrated pest management
Cash Flow Problems & Possible Solutions cont...

5. Increase Selling Flexibility

Solution

Improve marketing plans

For non perishable products have some flexibility in timing sales taking into account cost of storage

The idea is to improve profit per sale
Cash Flow Problems & Possible Solutions cont…

6. Need to Reduce Cash Out flows

Solution

Lease or rent instead of owning

Down payments and loan repayments associated with purchase of land, building and machinery may put a heavy burden on the cash flows
Cash Flow Problems & Possible Solutions cont…

7. Increase Cash Availability

Solution

Consider taking an off-farm job (part or full time) – with proper structures laid for farm

Re evaluate the expenses associated with farm support activities eg transport, clothing

Refinancing of loans

Sale of Assets
Tips to keep your farm business financially on track

1. Prepare a business plan setting out exactly what you intend to do for at least the first 3 years.

This is the document that determines whether you have a business or not. Be realistic, objective and get others to read it and challenge you on the assumptions you make.
Tips to keep your farm business financially on track cont...

2. *Before the start of each harvest/production year prepare a realistic Profitability Budget.*

- This will allow you to compare the impact on profit of your chosen enterprises and the effect on profit if you change the enterprise mix.
- The Profitability Budget also sets your target level of expenditure for the year. Any spending over and above this will effect your profit.
3. Before the start of the harvest/production year prepare a monthly cash flow statement for the next 12 months.

This is a key document as it will allow you to work out your maximum borrowing requirement and arrange finance in advance.
Tips to keep your farm business financially on track cont...

- 4. Having produced these key documents, **monitor** your performance against them on a regular basis.

- Regular monitoring against budget and cash flow forecast is essential. There is no point creating a map for your journey which you then leave at home!

- Regular monitoring allows you to spot problems early and take corrective action.

- Regular monitoring also allows you to spot opportunities and take full advantage of them.
5. Keep your **accounting records up to date** and use the services of a bookkeeper/farm secretary if necessary.

- These records provide the information that will allow you to monitor both your performance against budget and cash flow.
- Accountants fees are based on the time they spend working on your affairs. The better the records you keep, the less you will pay in professional fees. Don’t be afraid to use the services of a bookkeeper if time does not allow you to keep on top of the records yourself.
6. Use a bank manager, accountant and solicitor/lawyer that understand and specialise in Farming.

Professionals that specialise in the Agricultural Industry are best placed to advise you. They look at a number of farming businesses day in, day out and see what works and what doesn’t.
7. **Communicate** with your bank manager and other professional advisors.

You will have far more chance of securing additional finance if you stay in regular touch with your bank manager and keep him or her informed of how you are performing against budget throughout the year.

Farming can be lonely and both your bank manager and accountant can give you valuable advice on a timely basis if you keep them informed.
Tips to keep your farm business financially on track... 

- 8. Be **flexible**. If you identify problems act quickly. Take advice if necessary and put it into action immediately.

- Business failures are littered with examples of good businesses that don’t survive due to people “putting their head in the sand”.
9. If you are going to use computer software to do your accounts ensure that you get the right **Hardware, Software, and Training** before you start.

A number of businesses have started by purchasing some cheap (off the shelve) accounting software and tried to teach themselves. Unfortunately this often leads to numerous problems including VAT return errors.

In addition, computerised accounting systems which have been used incorrectly can take longer to put right than manual records.
10. Remain positive and never forget that you are working in the farming industry because it is your passion.

There are times in all businesses when the going is tough and you will question your reasons for continuing. The most successful businesses however continue to be those that are set up by individuals who have a true passion for what they do.
Ten Profitability Pitfalls to Avoid or Fix # 49

- Cost of Goods Sold (COGS) should not exceed the proceeds from sale (Sales)
- Analyze the drivers of COGS which include:
  - Poor crop management and harvest practices
  - Poor out grower selection and oversight
  - Poor yield due to weather
  - High obsolescence due to poor storage
  - Loss of out growers due to failure to honor agreements
  - Failure to record and analyze production costs
Ten Profitability Pitfalls to Avoid or Fix # 49 cont...

2. Excessive distribution costs
   - Geographical location of customers widespread
   - Poor infrastructure
   - High fuel cost
   - High maintenance costs of delivery vans
   - Not factoring distribution cost
   - Delivery not justified by the margins
• 3. Poor Receivables/Debtors management
• Poor credit standards
• Granting credit to customers who are not credit worthy
• Poor collection efforts
• Poor monitoring of Debtors
• Delayed invoicing/reminders
• Long credit periods
Ten Profitability Pitfalls to Avoid or Fix # 49 cont...

4. Poor quality products/seeds
   • Substandard seeds that may not attract good prices
   • Lost reputation from customers
   • Availability of substitutes of superior seeds at reasonable prices
Ten Profitability Pitfalls to Avoid or Fix # 49 cont...

5. Production of wrong products/ seeds without regard to the tastes and preference of customers

- Holding excessive levels of inventory that cannot be sold
- High storage costs
- Obsolescence and perishability of seeds
Ten Profitability Pitfalls to Avoid or Fix # 49 cont…

- Too much price concessions
- Trying to undercut competitors
- Too much drive to sell
- Lock of proper costing systems
- Selling at a price below the variable costs of production
- Costs of production in excess of sales proceeds leading to loses
Ten Profitability Pitfalls to Avoid or Fix # 49 cont...

7. Slow or poor planning and processing of seedlings leading to:
   - Stock outs
   - Missed sales
   - Last minute distributions which maybe too costly
   - No safety or buffer stock
Ten Profitability Pitfalls to Avoid or Fix # 49 cont...

8. Poor pricing Decision

- Price of seeds depends on a number of variables including:
  - Value of product/seed to a customer- it is possible to practice price discrimination to different customers
  - Cost structure of the company- the cost incurred up to the point of sale
  - Profitability goals of the farmer
  - Availability of competitors or substitutes
9. Financial illiteracy of the management team:
- A farmer is essentially a businessperson
- He/she must understand the meaning of the financial statement numbers
- Have a firm grasp on the financial position, financial performance, cash flows and business forecasting
Ten Profitability Pitfalls to Avoid or Fix # 49 cont...

- 10. Poor staffing decisions
  - Employing people based on criteria other than competence
  - Failing to match people with jobs
  - Too much costs paid on salaries and wages
  - Poor human resource policies - not sure when to hire and fire