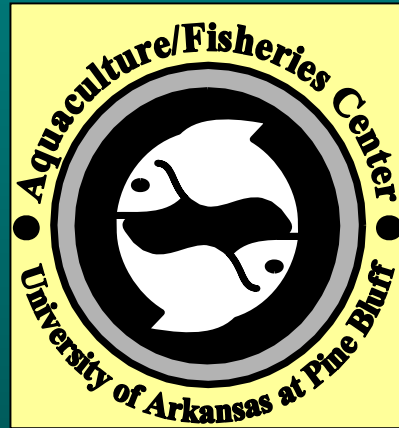


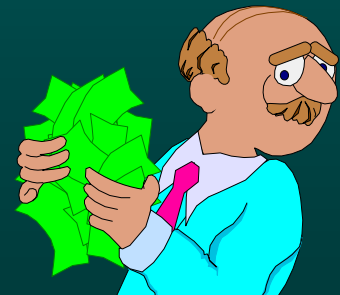
# Management Based on Cash Flow



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# Financial Analysis

- Balance Sheet
- Income Statement
- Cash Flow Statement



# How Are These Calculated?

- The UAPB booth has a sign-up sheet for a CD with a tutorial (in EXCEL) that teaches you to calculate these.
- Includes exercise balance sheet, income statement, cash flow budgets,
- The correct versions, the financial ratios, and
- Includes a brief interpretation of each ratio and how to improve it.



# Financial Efficiency: Liquidity

- **Liquidity is the ability of a business to meet cash flow obligations.**
- **It is important to keep financial transactions of the business running smoothly.**

# Measures of Liquidity

- Current Ratio
- Working Capital
- Interest Coverage Ratio
- Cash Flow Coverage Ratio
- Debt-Servicing Ratio
- Cash Flow Risk and Sensitivity Ratios

<b>1. Current Assets</b>			
Cash on deposit			\$15,849
Fish inventory			\$261,438
<b>Total Current Assets</b>			<b>\$277,287</b>
<b>2. Non-Current Assets</b>			
Equipment			\$152,324
Ponds			\$165,237
Buildings			\$83,470
Land			\$74,182
<b>Total Non-Current Assets</b>			<b>\$475,213</b>
<b>3. Total Assets</b>			<b>\$752,500</b>
<b>Liabilities</b>			
<b>4. Current Liabilities</b>			
Payments on debt due and payable over next year			\$242,168
<b>Total Current Liabilities</b>			<b>\$242,168</b>
<b>5. Non-Current Liabilities</b>			
Equipment loan			\$84,329
Real estate loan			\$94,750
<b>Total Non-Current Liabilities</b>			<b>\$179,079</b>
<b>6. Total Liabilities</b>			<b>\$421,247</b>
<b>7. Net Worth</b>			<b>\$331,253</b>
<b>Current Ratio (1/4)</b>			<b>1.15</b>
<b>Working Capital (1-4)</b>			<b>\$35,119</b>
<b>Equity/Asset Ratio (7/3)</b>			<b>0.44</b>
<b>Debt/Asset Ratio (6/3)</b>			<b>0.56</b>
<b>Debt/Equity Ratio (6/7)</b>			<b>1.27</b>
<b>Debt Structure (4/6)</b>			<b>0.57</b>

# Cash Flow Budget

- **What is it?**
  - Summary of the cash inflows and outflows over a given period of time.
  - Important forward planning tool.
- **Purpose**
  - Estimate future borrowing needs.
  - Estimates loan repayment capacity.
  - Schedule payments and harvests.

# Characteristics

- Includes *all* cash income and cash expenses.
  - Cash inflows would include sale of capital items and new loans.
  - Cash outflows would include payment on loans and cost of new capital assets
  - Includes personal cash income and expenses.
- Includes the *timing* of cash flows.

# Characteristics

- ***Does not include any noncash income or noncash expenses***
  - Does not include inventory changes or depreciation.

# Monthly Cash Flow Budget

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>Beginning Cash</b>	15,849.00	39.79	42,835.71	12,065.73	46,466.02	24,256.90	1,145.96	34,568.03	5,806.26	36,263.66
Receipts from catfish sold		60,000.00		60,000.00			60,000.00		60,000.00	
<b>Cash Inflow</b>	15,849.00	60,039.79	42,835.71	72,065.73	46,466.02	24,256.90	61,145.96	34,568.03	65,806.26	36,263.66
<b>Operating Cash Expenses</b>										
Fingerlings	-	-	12,415.00	-	-	-	-	-	-	-
Feed	3,830.00	4,790.00	5,750.00	6,710.00	7,670.00	8,620.00	10,540.00	11,500.00	14,370.00	9,580.00
Gas, Fuel, and Oil	380.00	470.00	570.00	660.00	750.00	850.00	1,040.00	1,130.00	1,410.00	940.00
Chemicals	-	-	470.00	-	-	470.00	-	620.00	-	-
Labor	1,000.00	1,000.00	1,730.00	1,730.00	1,730.00	1,950.00	1,950.00	1,950.00	1,950.00	1,730.00
Harvesting & Hauling	717.39	722.79	806.91	692.32	687.24	681.21	695.49	754.85	701.20	729.46
Machine Hire	-	-	-	-	-	150.00	150.00	290.00	150.00	-
Office Expenses	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Rent	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00
Repairs and Maintenance	1,310.00	1,310.00	1,310.00	1,310.00	1,310.00	1,310.00	1,310.00	1,310.00	1,310.00	1,310.00
Utilities	190.00	390.00	970.00	1,360.00	1,560.00	2,340.00	2,530.00	2,730.00	2,920.00	2,340.00
Other Operating Costs	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00	360.00
Total Operating Expenses	8,157.39	9,412.79	24,751.91	13,192.32	14,437.24	17,101.21	18,945.49	21,014.85	23,541.20	17,359.46
<b>Fixed Cash Expenses</b>										
Taxes and Insurance	-	-	-	4,760.00	-	-	-	-	-	-
Total Fixed cash Expenses	-	-	-	4,760.00	-	-	-	-	-	-
<b>Living Expenses</b>	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
<b>Other Expenses</b>	-	-	-	-	-	-	-	-	-	-
<b>Scheduled Debt Payments</b>										
Real Estate Principal	265.00	-	-	265.00	-	-	265.00	-	-	265.00
Interest (10% APR)	2,368.75	-	-	2,364.33	-	-	2,357.71	-	-	2,351.08
Equipment Principal	-	665.00	-	-	665.00	-	-	665.00	-	-
Interest (10% APR)	-	2,108.23	-	-	2,097.14	-	-	2,080.52	-	-
Operating Principal	-	-	1,000.00	-	-	1,000.00	-	-	1,000.00	-
Interest (10% APR)	2,018.07	2,018.07	2,018.07	2,018.07	2,009.73	2,009.73	2,009.73	2,001.40	2,001.40	2,001.40
<b>Total Cash Outflow</b>	15,809.21	17,204.08	30,769.98	25,599.72	22,209.11	23,110.94	26,577.93	28,761.77	29,542.60	24,976.94
<b>Cash Available</b>	39.79	42,835.71	12,065.73	46,466.02	24,256.90	1,145.96	34,568.03	5,806.26	36,263.66	11,286.72
<b>New Borrowing</b>	-	-	-	-	-	-	-	-	-	-
<b>Cash Balance</b>	39.79	42,835.71	12,065.73	46,466.02	24,256.90	1,145.96	34,568.03	5,806.26	36,263.66	11,286.72

# Liquidity - Cash Flow Coverage Ratio

- Cash available divided by cash required for interest and principal payments.
- Calculated from the cash flow budget.

→ Interpretation: The higher the ratio, the more favorable the liquidity.

# Cash Flow Coverage Ratio (Cash available/interest & principal payments)

<b>Scheduled Debt Payments</b>	
Real Estate Principal	1,060.00
Interest (10% APR)	9,441.88
Equipment Principal	2,660.00
Interest (10% APR)	8,349.78
Operating Principal	4,000.00
Interest (10% APR)	33,475.29
<b>Total Cash Outflow</b>	<b>291,534.65</b>
<b>Cash Available</b>	<b>(5,685.65)</b>
<b>New Borrowing</b>	<b>187,573.51</b>
<b>Cash Balance</b>	<b>181,887.85</b>

**Cash Flow Coverage Ratio = (0.26)**

# Cash Flow Coverage Ratio

- Excludes payments on the operating loan balance because they are so flexible.
- Indicates the extent to which the excess cash generated by the business provides a cushion for or flexibility in covering these debt-servicing requirements.

# Debt-Servicing Ratio

- Cash required for interest and principal payments divided by total cash inflow.
- ▲ *Interpretation: the greater the debt-servicing ratio, the greater the burden of debt on cash flow, and the lower the liquidity.*

# Debt-Servicing Ratio (interest & principal payments/cash inflow)

**Total Cash Inflow = \$285,849**

<b>Scheduled Debt Payments</b>	
Real Estate Principal	1,060.00
Interest (10% APR)	9,441.88
Equipment Principal	2,660.00
Interest (10% APR)	8,349.78
Operating Principal	4,000.00
Interest (10% APR)	33,475.29
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**Debt-Servicing Ratio = 0.21**

# Cash Flow Risk and Sensitivity Ratios

- 1 Percent farm revenue can decline and still meet cash flows. (Cash available/total cash inflow)**
- 2 Percent farm expenses can increase and still meet cash flows. (Excess available cash/cash operating expenses)**
- 3 Percent interest rates can increase and still meet cash flows. (Excess available cash/total liabilities)**

# Cash Flow Risk

**Total Cash Inflow = \$285,849**

<b>Scheduled Debt Payments</b>	
Real Estate Principal	1,060.00
Interest (10% APR)	9,441.88
Equipment Principal	2,660.00
Interest (10% APR)	8,349.78
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<b>New Borrowing</b>	<b>187,573.51</b>
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**Cash available/total cash inflow = (0.02)**

# Cash Flow Risk and Sensitivity Ratios

- 1 Percent farm revenue can decline and still meet cash flows. (Cash available/ total cash available)**
- 2 Percent farm expenses can increase and still meet cash flows. (Cash available/cash operating expenses)**
- 3 Percent interest rates can increase and still meet cash flows. (Cash available/total liabilities)**

# Cash Flow Sensitivity

**Total Cash Inflow = \$285,849**

<b>Scheduled Debt Payments</b>	
Real Estate Principal	1,060.00
Interest (10% APR)	9,441.88
Equipment Principal	2,660.00
Interest (10% APR)	8,349.78
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**Cash available/cash operating expenses = (0.03)**

# Cash Flow Risk and Sensitivity Ratios

- 1 Percent farm revenue can decline and still meet cash flows. (Excess available cash/ total cash available)
- 2 Percent farm expenses can increase and still meet cash flows. (Excess available cash/cash operating expenses)
- 3 Percent interest rates can increase and still meet cash flows. (Cash available/total liabilities) = (0.01)

# Cash Flow Scenarios

Farm A		Farm B	
<b>Sept.</b>	<b>\$60,000</b>	<b>Feb.</b>	<b>\$60,000</b>
<b>Oct.</b>	<b>\$90,000</b>	<b>April</b>	<b>\$60,000</b>
<b>Nov.</b>	<b>\$60,000</b>	<b>July</b>	<b>\$60,000</b>
<b>Dec.</b>	<b>\$60,000</b>	<b>Sept.</b>	<b>\$60,000</b>
		<b>Nov.</b>	<b>\$30,000</b>

# Liquidity Measures for Two Scenarios

	<b>A</b>	<b>B</b>
<b>Cash Flow Coverage</b>	<b>(0.26)</b>	<b>0.17</b>
<b>Debt-Servicing</b>	<b>0.21</b>	<b>0.17</b>
<b>Cash avail./cash inflow</b>	<b>(0.02)</b>	<b>0.01</b>
<b>Cash avail./op. expenses</b>	<b>(0.03)</b>	<b>0.02</b>
<b>Cash avail./liabilities</b>	<b>(0.01)</b>	<b>0.01</b>

