

Naw, I won't be going out tonight.  
I'm on the "I only have \$10  
till Friday" budget.



# 11-4 Cash Flow and Budgeting

ADVANCED FINANCIAL ALGEBRA

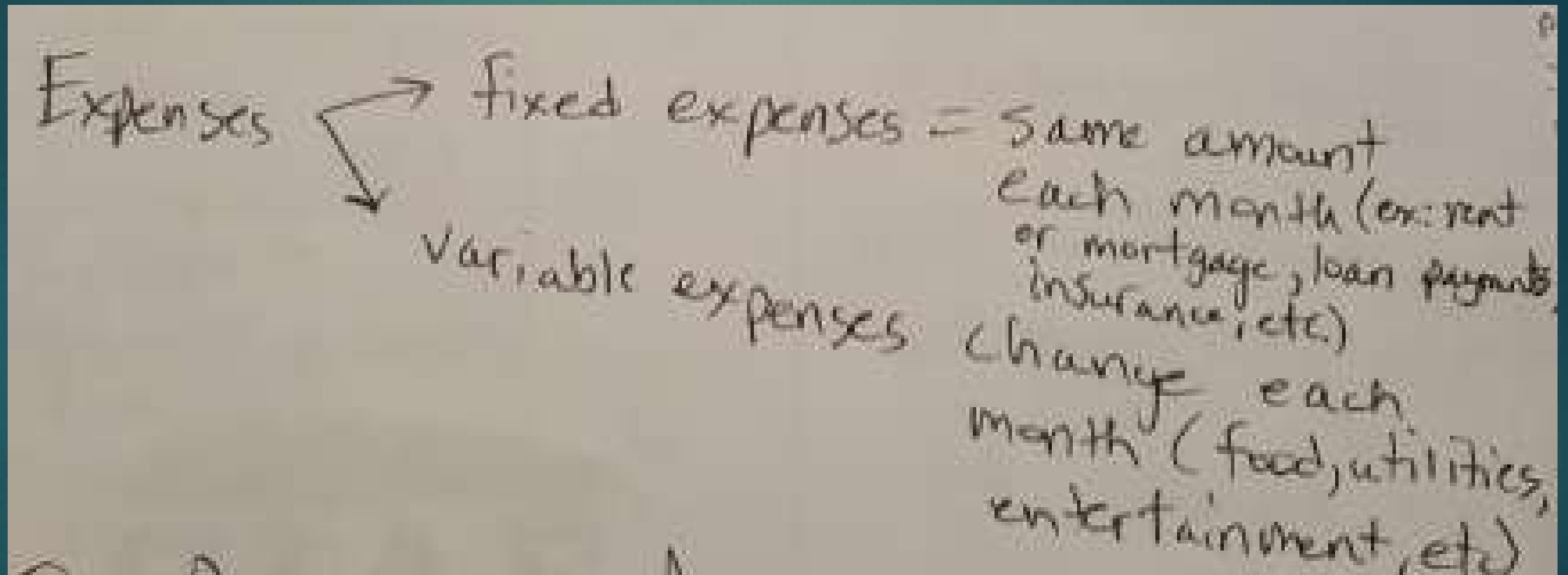


# Budget and Cash Flow Analysis

Budget = well thought out plan created  
by looking at financial goals & bills.

Cash Flow Analysis: look at income, expenses,  
and timing to help develop  
budget plan

# Expenses – fixed or variable?



# Example #1 monthly cash flow

- ▶ Dave and Joan want to chart their monthly cash flow. Create a spreadsheet that will help them keep track of their income and expenses for the month.
- ▶ SOLUTION: (this is one way it can be done)

Monthly Income		Per Year	
Main job	5,600	↓	
Second job	500		
<u>total</u>	<u>6,100</u>		
Fixed Expenses (per month)		Non-monthly expenses	
rent/mortgage	2,400	medical/dental	600
life insurance	50	auto repairs	700
car insurance	60	house repairs	1,100
health insurance	50	vacation	2,000
student loan pymt	150	gifts	600
car loan pymt	280	other/emergency	200
tu		taxes	4,000
<u>total</u>	<u>2,990</u>		

Variable Expense (estimate per month)		total non-monthly per year = 9200
electricity	80	per month → \$766.67/mo
water	30	
cell phone	120	
groceries	800	
dining out	150	
car gas	160	
entertainment	200	
savings	300	
paying off cc bills	160	
<u>total</u>	<u>2,000</u>	

Income	6100
- Fixed	2990
- Variable	2000
- Monthly avg	800ish
	310 extra





# Example #2 SOLUTION

Solution:

Car insurance	\$60
Car loan pymt.	\$350
Car repairs = \$700/yr = 12	\$58.33/mo
Car gas	\$160
	<hr/>
total	\$558.33
	<hr/>
income	\$6,100

$\hat{r} \approx .09153 \approx 9.153\%$   
which is less than  
10-15%, they are OK

Savings?  $\frac{300}{6100} \approx .04918 \approx 4.9\%$   
should be 5-10%  
a little short.

# Example #4 – annual expense budget

- ▶ We will do this together on a spreadsheet next class.
- ▶ NOTE: we skipped example #3

# Net Worth

- ▶ Net Worth = Assets – Liabilities
- ▶ Assets are what you own like cars, house, savings, jewelry, stocks, etc.
- ▶ Liabilities are what you owe on loans, etc.





# Example #5 – net worth

- ▶ Liam is single, in his mid-20's, and owns a condo in a big city. Last year, his net worth was \$205,780. What is it now and what does the change in net worth mean?

- ▶ SOLUTION:

- ▶ New net worth = assets – liabilities
- ▶ = 673,180 – 432,600
- ▶ **New net worth = \$240,580**
- ▶ This is better than last year, which
- ▶ means that his finances are improving.

A handwritten financial statement on a light-colored background, divided into two columns: Assets and Liabilities. The Assets column lists: current condo value \$580,000, current car value \$17,000, \$ in checking acct. \$980, \$ in savings acct. \$22,500, retirement acct. \$24,800, current stock value \$18,300, and current value of guitar collection \$21,200. A horizontal line is drawn above the total assets of \$673,180. The Liabilities column lists: balance on condo mortgage \$380,000, balance on student loans \$51,000, and credit card debt \$1,600. A horizontal line is drawn above the total liabilities of \$432,600. The overall net worth is not explicitly written but is the difference between the two totals.

<u>Assets</u>		<u>Liabilities</u>	
current condo value	\$580,000	balance on condo mortgage	\$380,000
current car value	\$17,000	balance on student loans	\$51,000
\$ in checking acct.	\$980	credit card debt	\$1,600
\$ in savings acct.	\$22,500		
retirement acct.	\$24,800		
current stock value	\$18,300		
current value of guitar collection	\$21,200		
		total	\$432,600
total	\$673,180		

Assignment: pg 698 #2, 4, 5, 6, 10, finish intro. slide, auto expense slide, housing expense slide, food budget slide, and year-long budget spreadsheet (like page 678 Sample B), then create a cash flow spreadsheet (like page 691) for budget project

▶ 2)

	July	Aug	Sept	Oct	Nov	Dec	Average
<b>Groceries (Food)</b>	740	800	650	820	820	880	a.
<b>Dining Out</b>	120	150	300	80	100	150	b.
<b>Fuel (car)</b>	200	240	320	300	280	220	c.
<b>Cell Phone</b>	104	108	126	140	120	104	d.
<b>Land Line Phone</b>	80	90	60	80	100	88	e.
<b>Electricity</b>	140	160	120	90	140	160	f.
<b>Water</b>	52	58	62	48	48	62	g.



The Shah family uses the average of six months as their budget starting point in each category. Find each average.

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- ▶ 4) Bob is retired and owns a home. See his assets and liabilities in the box shown.
  - ▶ a) Calculate Bob's net worth.
  - ▶ b) Two years ago, Bob's net worth was \$650,000. Last year, his net worth was \$740,500. What is the approximate percent of increase or decrease between two years ago and last year?
  - ▶ c) What is the approximate percent of increase or decrease between last year and this year?
  - ▶ d) Compare the values. What do the changes imply?

<b>Assets</b>	
Current value of home	\$422,000
Current value of car ( <i>Kelley Blue Book</i> )	\$22,000
Balance in checking account	\$2,380
Balance of savings accounts	\$140,500
Balance of retirement account	\$250,000
Value of computer	\$1,800
Value of stocks/bonds	\$67,000
<b>Liabilities</b>	
Balance owed on home mortgage	\$120,000
Balance owed on home equity loan	\$21,000
Combined credit card debt	\$940

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- ▶ 5) The Mountain View Consumer Counseling Service suggests that the monthly food budget be no more than 15%-30% of income.
  - ▶ a) What is Laura's total monthly food bill including dining out?
  - ▶ b) What percent of her income is spent on food?
  - ▶ c) Is Laura below, in, or above the recommended interval?

Laura's Financial Report			
<b>Income</b>			
Teacher, monthly after-tax income: \$5,000			
Tutor, monthly after-tax income: \$1,200			
<b>Monthly Expenses</b>			
Rent	\$2,200	Groceries	\$600
Car loan	\$180	Personal loan	\$100
Electricity	\$80	Land line phone	\$60
Sanitation	\$50	Auto insurance	\$70
Cable/Internet	\$40	Savings	\$400
Dining out	\$200	College loan	\$250
Gasoline	\$200	Cell phone	\$80
Water	\$40	Medical insurance	\$60
Renter's insurance	\$30	Entertainment	\$250
Debt reduction	\$200		
<b>Non-Monthly Expenses</b>			
Medical: \$250 in April, \$250 in September			
Auto-related: \$400 in October			
Home-related: \$250 in February, \$250 in November			
Life insurance: \$110 in April, August, December			
Tuition: \$2,000 in May (summer) and August (fall)			
Vacation: \$800 in July			
Gifts: \$250 in March and December			
Contributions: \$10 each week of the year			
Repairs: \$280 in October			
Taxes: \$1,500 in January and September			



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- ▶ 6) Examine Laura's nonmonthly expenses in #5.
  - ▶ a) Which month has the greatest expenses?
  - ▶ b) How might Laura prepare for those expenses?
  
- ▶ 10) Create a year-long budget for Laura's information in #5 like Sample B on page 678.