

Average college senior has \$2,800 in credit card debt

Copyright ©2007 Stephen G. Buell

Even assuming no more new debt, if you make the minimum monthly payment, it will take about 30 years to pay it all off

Copyright ©2007 Stephen G. Buell

Credit and Credit Cards

The new 8,000,000GB iPod - \$349
The new Blueberry Razr - \$150
Having no credit card debt – priceless
There are some things MasterCard can't buy;
for everything else, there's cash

Copyright ©2007 Stephen G. Buell

Credit cards

- Give you the ability to live (*temporarily*) well beyond your means
- ½ of American households are concerned about making their credit card payments
- Average college senior has \$2,800 in credit card debt**
 - @17% interest & minimum monthly payments
 - Roughly \$460 a year in interest alone
 - Even assuming no more new debt, will take about 30 years to pay it all off (\$7,000)
- Avoid credit card debt & pay it off ASAP**

Copyright ©2007 Stephen G. Buell

Consumer credit

- Used by people for purchases other than a house (mortgages are separate category)
- Two types of consumer credit
 - Installment loans
 - Borrower pays regular equal amounts periodically
 - Car loans, school loans, Best Buy's home theater
 - Payments include interest and principal
 - **Non-installment loans – our focus**
 - Single payment loans
 - Open-ended credit
 - Revolving credit or a line-of-credit
 - Credit cards

Copyright ©2007 Stephen G. Buell

Non-installment loans

- Single payment
 - Borrow \$1,000 and agree to repay \$1,100 in one year => 10% interest
- Open-ended or revolving credit
 - Credit is extended before any transaction
 - Pre-approved maximum or limit
 - No need to reapply each time if below limit
 - Credit cards
 - Revolving credit account

Copyright ©2007 Stephen G. Buell

Possible good reasons to borrow

- For convenience
 - Simpler to buy items (phone or internet), provides records, could be leverage if item is defective
- For emergencies
 - Medical or car repairs
- For making airline or hotel reservations

Copyright ©2007 Stephen G. Buell

Another good reason to borrow

- For student loans



Copyright ©2007 Stephen G. Buell

Still another reason to borrow

- For consolidating debts
 - Decrease monthly payment but increase term (good?)

Copyright ©2007 Stephen G. Buell

Consolidating debts

- \$300/mo auto loan @ 6%/yr for 24 months
 - $PV_1 = 300(PVIF_{a-6/12\%-24})$
 - $PV_1 = \$6,769$
- \$180/mo school loan @ 5%/yr for 48 months
 - $PV_2 = 180(PVIF_{a-5/12\%-48})$
 - $PV_2 = \$7,816$
- \$200/mo credit card @ 10%/yr for 30 months
 - $PV_3 = 200(PVIF_{a-10/12\%-30})$
 - $PV_3 = \$5,289$
- Borrow $6769 + 7816 + 5289$ or \$19,875 @12% for 60 months
- $19875 = PMT(PVIF_{a-1\%-60})$
 - $PMT = \$442$ vs. original monthly payments of $300 + 180 + 200 = 680$
- Decreased monthly payment but at the cost of lengthening the term to 60 months and at a higher interest rate

Copyright ©2007 Stephen G. Buell

One possible bad result of credit

- Having to pay high interest rates
 - Using APR's (Annual Percentage Rates) can be misleading
 - Differences in compounding frequencies and terms make comparisons difficult
 - Use EAR's (Effective Annual Rates)
 - Considers the frequency of compounding
 - $EAR = (1 + APR/freq)^{freq} - 1$
 - When choosing between different loans
 - Compare EAR's and pick lowest

Copyright ©2007 Stephen G. Buell

Misleading APR's

- Choosing between Loans A and B
 - $APR_A = 8\%/yr$ comp daily
 - $APR_B = 8.15\%/yr$ comp semi-annually
 - $APR_B > APR_A$, but...
- $EAR_A = (1 + .08/365)^{365} - 1 = 8.33\%$
 - $1 \Rightarrow PV \ 8/365 \Rightarrow i \ 365 \Rightarrow n$ solve $FV = 1.0833$
 - $1.0833 - 1 = .0833 = 8.33\%$
- $EAR_B = (1 + .0815/2)^2 - 1 = 8.32\%$
- Slightly better off borrowing with Loan B

Copyright ©2007 Stephen G. Buell

More bad things about borrowing

- High fees and interest rates
 - Annual credit card fees of \$25 to \$50/yr
 - Punitive fee of \$10 to \$25 for late payment
 - Punitive interest rates if late payment
- Temptation to overspend
 - **Easy to live beyond your means (for a while)**
 - You're stuck with high minimum payments that often get worse as you borrow on a second card to pay the monthly payment of the first card
- Reduces your ability to buy a house

Copyright ©2007 Stephen G. Buell

Types of open-ended credit

- Used for purchasing goods and services on credit at stores
- Used for cash advances at ATM's
- Usually in form of credit cards
 - Bank cards (Visa and MasterCard)
 - Store credit cards (Macy's, Best Buy)
 - Gasoline credit cards (Exxon, Shell)
 - **The most abused form of credit**

Copyright ©2007 Stephen G. Buell

Credit cards

- Allow you to carry a balance from month to month
 - Only need make minimum monthly payment
 - Covers previous month's interest + **teensy payment of the outstanding principal or amt owed**
 - Lender doesn't want you to pay off balance
 - Wants you to make only the minimum payment
 - Duh?? Interest on unpaid balance is near legal max
 - Some people carry a balance for years
 - Stupid**

Copyright ©2007 Stephen G. Buell

Bank cards

- Visa, MasterCard, Discover and Optima (AMEX)
- Open-ended credit accounts issued by financial institutions
 - Commercial banks, S&L's, credit unions
 - These guys are the actual lenders
 - Visa and MC are service providers
 - These guys don't lend you anything
 - Just maintain electronic records and process transactions
 - Banks, S&L's and merchants pay fees to Visa & MC

Copyright ©2007 Stephen G. Buell

Cash advances

- Can use Visa & MC at ATM's for cash
 - But you pay transaction fees and higher APR's than on purchases
 - Interest charges begin immediately on cash adv
 - No interest on purchases **if you pay off balance**
 - Mail out "convenience checks" that you can use to buy things with (duh!)
 - Not checks but gimmick to entice cash advances
 - Bank wants you to take a cash advance since the APR is so high

Copyright ©2007 Stephen G. Buell

Metal credit cards

- Nothing special about "metal" cards
 - Visa Gold, MC Platinum, etc.
 - Give you higher spending limits
 - You probably passed some stiffer credit check
 - Not a big deal
 - If you've been a good on-time-payer, they'll raise your limit anyway just by calling customer service
- Remember, the lender wants you to use your new Platinum card – high APR

Copyright ©2007 Stephen G. Buell

Store charge cards

- Gasoline, department stores, Best Buy
- Encourage you to shop more with them
 - Often entice you with 10% off initial purchase
- Want you to buy a lot and NOT pay off your balance
 - They make a high rate when you don't pay
 - Careful about spending beyond your means
 - Just adds another monthly payment which you should be able to avoid

Copyright ©2007 Stephen G. Buell

“It’s OK to leave home without it”

- American Express, Diner’s Club, Carte Blanche
 - **Charge cards, not credit cards**
 - Require balance be paid off each month
 - “Prestigious”??? – gimme a break
 - \$60 annual fee and not accepted everywhere
 - “At the Winter Olympics you’ll see death defying ski jumping ... but bring your Visa, because the Olympics will take your breath away but it won’t take American Express”

Copyright ©2007 Stephen G. Buell

Even though credit cards are so bad,

You should still get a Visa and a MasterCard

- Once you get your first full-time job
 - Apply for a Visa and/or a MasterCard
 - It’s a good thing to get them – just be careful
 - Make a couple of small purchases with them for a couple of months
 - Pay off the balances early or at least on time
 - Need to establish a credit history and your credit rating**
 - Key for applying for car loans and mortgages

Copyright ©2007 Stephen G. Buell

Extra credit

Service credit

- Electric company or TV cable company provides service in advance - expects payment within 15 days
- You should definitely consider a constant payment plan (**budget plan**) for power companies
 - 11 predictable even months + 12th adjustment up or down
 - Easier to budget for (Watch out for AC in July, August)
- You should consider paying for cable a year in advance to get lower monthly rate

*Totally off the subject, a constant payment plan is also very good idea for insurance (car, life, home, etc)

Copyright ©2007 Stephen G. Buell

Credit application process

- Application asks you to list your income, bank accounts and outstanding debts
- Lender (bank, merchant, utility, etc) runs a credit check on you
 - Obtains *credit report* from a *credit bureau*
 - How does the local credit bureau know anything about you?

Copyright ©2007 Stephen G. Buell

Big brother is watching

- Lender pays fee to the local credit bureau for each credit report it requests
 - Lender is charged lower fees in return for providing info on its borrowers' repayment histories
 - Builds the credit bureau's database
 - 2,000 local credit bureaus belong to national network that shares its info with other members
 - 160 million people in database

Copyright ©2007 Stephen G. Buell

How do you rate?

- What's your credit rating or credit score?
- Statistical measure of how good a risk you are based on:
 - Your prior credit usage, repayment patterns, income, length of employment, home ownership status
- The better your score, the lower the interest rate
 - Easier to get credit and at better rates
- Somewhere out there is a lender for everyone
 - But it could be at a very high rate
 - Car dealer radio ads "Bad credit? No credit? Here at Crazy Eddie's Motors, we don't care! C'mon in!"
 - 18% for a car loan???

Copyright ©2007 Stephen G. Buell

Check it out

- You can get a free credit report once a year at www.annualcreditreport.com

Copyright ©2007 Stephen G. Buell

You got your own credit card

- Now what?
 - You charge some stuff on it
- Now what?
 - The merchant notifies Visa or MasterCard
 - Nowadays probably the same day
 - Visa or MC posts it to your account
- Now what?
 - A few days later Visa or MC sends you a monthly statement

Copyright ©2007 Stephen G. Buell

Know your credit card statement

- Billing date => cut-off date for transactions
 - Anything after this date goes on next statement
- Due date => 20 to 25 days after billing date
 - Must pay by due date or be charged \$10 to \$15 late fee and credit bureau is possibly notified
- Transaction date => actual day of purchase
- Posting date => when credit card company was notified and "posted" the sale
- No interest on purchases between posting and due dates (grace period) **ONLY IF PREVIOUS MONTH'S BILL WAS PAID IN FULL**
 - Otherwise interest is charged from posting date

Copyright ©2007 Stephen G. Buell

Pay it off

- Minimum payment is specified
 - Very small and mostly all interest charges
 - Want you to continue to carry high balance
 - For example: \$700 balance has minimum payment of only \$15.00 with finance charges of \$10.50 (paying only 4.50 to reduce the 700)
 - If APR = 18% (monthly rate is $18/12 = 1.5\%$)
 - Interest = $.015 \times 700 = \$10.50$
 - EAR = $(1 + .18/12)^{12} - 1 = 19.6\%$ per year

Copyright ©2007 Stephen G. Buell

Be the other 1/3

- 2 out of every 3 college students have credit card debt of over \$2,500
- At APR=18%, first year's finance charges are $.18 \times 2,500 = \$450$
 - If balance is not reduced, that's almost \$7,000 over the next 15 years
- No grace period on new purchases if you have an unpaid balance
- Not only is carrying a balance costly ...

Copyright ©2007 Stephen G. Buell

You didn't want that house anyway

- ❑ Banks usually allow a max of 40% of your gross income for debt payments
- ❑ If you earn \$48,000/yr or \$4,000/mo
 - Max of \$1,600/mo in debt payments
 - Assume 30-year mortgage at 8%/yr
 - Can borrow $1,600(PVIF_a^{-8/12-360}) = \$218,000$
- ❑ But have \$500/mo car and **credit card** payments
 - Max of \$1,100/mo mortgage payment
 - Can borrow only $1,100(PVIF_a^{-8/12-360}) = \$150,000$
 - Your dream house shrinks by \$68,000

Copyright ©2007 Stephen G. Buell

The best investment you can make

- ❑ Pay off your credit card balance as soon as you can
- ❑ Credit card interest rates are **usurious** and **draconian** - avoid carrying a balance
- ❑ **Paying off your credit card debt with a 18% interest rate is the same as investing your money at 18%**

Copyright ©2007 Stephen G. Buell
