January 27, 2025

LEC 05 - The Banking Services of Financial Institutions

Chapter 6 - Choosing a Source of Credit
Chapter 7 - The Finances of Housing

Learning Objectives

1. Analyze factors that affect the selection and use of financial services
2. Compare the types of financial institutions
3. Compare the costs and benefits to various savings plans
4. Identify factors used to evaluate different savings plans
5. Compare the costs and benefits of different types of chequing accounts

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Choosing a Source of Credit

- Credit costs money
    - Weight benefits of buying an item on credit versus waiting

Ask yourself the following questions:

1. Do I need a loan?
2. Can I afford a loan?
3. Can I qualify for a loan?

Meeting Daily Money Needs

Common Payment Choices

- Cash
- Cheque
- Credit / Debit Card
- E-Transfers
- Mobile Apps

Common Mistakes in Managing Cash

- Overspending as a result of impulse buying and using credit cards
- Not having enough liquid assets to pay current bills
- Using savings or borrowing to pay current expenses
- Failing to put unneeded funds in an investment plan

Costs of Carrying Credit Card Balances

Adjusted Balance Method

- Interest calculated after subtractring payments made during the billing period

Previous Balance Method

- No credit for payments made during the billing period

Average Daily Balance Method

- Interest calculated on average daily balance

January 27, 2025

LEC 05 - The Banking Services of Financial Institutions

Example

Assuming you have about $\$5,000$ in savings, how much should you keep in your chequing account if your monthly expenses are approximately $\$3,000$ a month? What would you do with any excess not put into the checking account?

- Keep about $\$3,000$ in chequing to cover expenses
- Invest the remainder
    - Ensure you can easily access the funds (keep the money liquid)
- 3-6 months of living expenses set aside

Example

What are common savings goals for a person who guys a five-year GIC paying 4.2% instead of an 18-month savings certificate paying 3%?

- Saving for a larger purchase
- Doesn't need the cash for the next five years

Example

Compute the earnings for the year for a $\$15,000$ savings account that earns 1.5% compounded a) annually, b) quarterly, c) monthly, d) daily

Annually

- $= FV(0.015,\ 1,\ 0,\ 10000,\ 0) \Rightarrow \$15,225.00$

Quarterly

- $= FV(0.00375,\ 4,\ 0,\ 10000,\ 0) \Rightarrow \$15,226.27$

Monthly

- $= FV(0.00125,\ 12,\ 0,\ 10000,\ 0) \Rightarrow \$15,226.55$

Daily

- $= FV(0.000411,\ 365,\ 0,\ 10000,\ 0) \Rightarrow \$15,226.69$

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Example

What is the value of a savings account that started with $\$1,500$, earning 2% (compounded annually) after 10 years?

$= FV(2,\ 10,\ 0,\ 1500,\ 0) \Rightarrow \$1,828.49$

Evaluating Savings Plans

Rate of Return (Yield): Percentage increase in value due to interest

Compounding: Interest on interest

Annual Percentage Rate (APR): Percentage cost of credit on a yearly basis

- May be compounded more frequently
- EAR may be higher than APR

Effective Annual Rate (EAR): Calculates the effective return taking compounding into effect

$EAR = (1 + \frac{APR}{m})^m - 1$, where m is the number of compounding periods per year

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Example

With a 26% marginal tax rate, would a tax-free yield of 7% or a taxable yield of 9.5% give you a better return on your savings? Why?

$9.50 \cdot (1 - 0.26) = 7.03 > 7$

Therefore, the taxable yield will give you a better return on savings because the effective yield is higher

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Opportunity Costs of Financial Services

- Higher rate of return may be obtained at the cost of lower liquidity
- Convenience of a 24-hour ATM must be weighed against the service fees
- The “no fee” chequing account that requires $4,000 non-interest-bearing minimum balance means lost interest of nearly $1,375 at 3% compounded over 10 years

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LEC 05 - The Banking Services of Financial Institutions

Example

What are the 2 main types of consumer credit?

1. Consumer Loans
    - One time loan that the borrower pays back in a specified period of time with a pre-determined payment schedule
    - Ex. Buying a car with a loan
2. Revolving Credit
    - A line of credit in which loans are made on a continuous basis and the borrower is billed periodically for at least partial payment
    - Ex. Credit cards

Personal Lines of Credit

- Set up as revolving line of credit
- Interest rate linked to lender's prime rate
- Withdraw up to specified limit
- Repay minimum stated or more
- Secured with assets

Home Equity Line of Credit

- A loan based on the current market value of your home less the amount still owing on your mortgage
- Outstanding mortgage balance and home equity line of credit ……..

Example

A few years ago, Maria Ramundo purchased a home for $\$600,000$. Today, the home is worth $\$700,000$. Her remaining mortgage balance is $\$370,000$. What is the maximum HELOC she can borrow?

$$HELOC = (700,000 \cdot 0.8) - 370,000 = \$190,000$$

Debt-Payments-to-Income Ratio

- The debt payments to income ratio is calculated by dividing your monthly expense by your gross monthly income
- Experts suggest this ratio does not exceed 20%

January 27, 2025

LEC 05 - The Banking Services of Financial Institutions

Example

Louise Gendron's monthly gross income is $\$5,000$. Her employer withholds $\$850$ in federal and provincial income taxes, $\$268.35$ towards the Canada Pension Plan, and $\$79$ for EI contributions. Louise contributes $\$100$ per month to her work pension. Her monthly credit payments for Visa and MasterCard are $\$175$ and $\$65$, respectively. Her monthly payment on an automobile loan is $\$525$ What is Louise's debt-payments-to-income ratio? Is Louise living within her means? Explain.

Net Take Home Pay:

Gross Income	5,000.00
- Income Tax	850.00
- CPP	268.35
- EI	79.00
- Pension	100.00
=	3,702.65

Monthly Debt Payments:

Visa	175.00
MasterCard	65.00
Auto Loan	525.00
=	765.00

Debt Ratio:

$= \frac{765.00}{3702.65} = 20.66\%$

- Experts suggest that this ratio should not exceed 20%
- Therefore, this suggests that Louise is over-extended (too much debt)

Example

Bob's net take-home income is $\$4,000$. What is the maximum he should use on debt payments?

$4,000 \cdot 0.2 = \$800$

Therefore, he should use at maximum $\$800$ for debt payments

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Debt-to-Equity Ratio

- The debt to equity ratio is calculated by dividing your total liabilities by your net worth
- Experts suggest this ratio stays below 100%

January 27, 2025

LEC 05 - The Banking Services of Financial Institutions

Example

Nadia has the following debt:

- **Visa** → $\$1,565$
- **MasterCard** → $\$3,500$
- **Other Debts** → $\$7,151$

Nadia's net worth is about $\$20,000$**. This equity is in mutual funds, an automobile, jewellery, furniture, and other personal property. What is Nadia's debt-to-equity ratio? Has she reached the upper limit of debt obligations? Explain.**

$DER = \frac{1565+3500+7151}{20000} = 61.08\%$

Therefore, Nadia has no reached the upper limit of debt obligations since her debt to equity ratio has not exceeded 100%

Example

Dinesh Dani flew to Toronto to attend his brother's wedding. Knowing his family would be busy, he did not ask anyone to meet him at the airport. Instead, he planned to rent a car to use while in Toronto. He has no nationally known credit cards but is prepared to pay cash for the rental car. The car rental agency refuses to rent him a car, even though they have several cars available. Why do you think Dinesh is unable to rent a car?

- They use the credit card incase there are any damages for the vehicle
- Gives more security and piece of mind
- Credit cards give you trust and a track record

Example

Juan Villavera, a recent teachers college graduate, has accepted a teaching position at Brockville High School. Juan moved to Brockville and applied for a car loan at the Royal Bank. He had never used credit or obtained a loan. The bank notified him that it will not approve the loan unless he has a co-signer. On what basis has the bank denied Juan credit?

- A co-signer is someone who will take responsibility for the loan if Juan in unable to pay the loan
- He doesn't have a track record, so the bank does not trust him