

GE1202 Managing Your Personal Finance

Lecture 4
Consumer Credits and Loans





What is Consumer Credit?

- Credit is an arrangement to receive cash, goods, or services now and pay for them in the future
- Consumer credit refers to the use of credit for personal needs (except a home mortgage) by individuals and families
- It is based on trust in people's ability and willingness to pay bills when due
- It works because people by and large are honest and responsible
- The advancement of payment technology has popularized the use of credit



Two Types of Credit

Closed-end credit

- One-time loans that the borrower pays back in a specified period of time and in payments of equal amounts
- Three most common types of closed-end credit
 - a. Instalment sales credit
 - A loan that allows you to receive merchandise
 - Make a down payment and repay the balance (plus interest) in equal instalments over a specified period
 - b. Instalment cash credit
 - Direct loan of money
 - Make no down payment and repay the balance (plus interest) in equal instalments over a specified period
 - c. Single lump-sum credit
 - A loan that must be repaid in total on a specified day
 - Usually 30 90 days



Two Types of Credit

- 2. Open-end 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
 - Line of credit
 - The maximum dollar amount of credit the lender has made available to you
 - You may have to pay interest, a periodic charge, or other finance charges
 - Two common types of open-end credit
 - Credit card
 - Revolving credit line



Revolving Credit Line

- This is a prearranged loan for a specified amount
 - Similar to a cash advance as funds are available up front
- Revolving credit differs from an installment loan
 - Installment loan has a fixed number of payments over a set period of time whereas revolving funds only require payment of interest plus any applicable fees
 - new loan application and credit reevaluation does not need to be completed upon utilizing revolving credit
 - Revolving credit is intended for shorter, smaller loans
- Revolving credit differs from credit card
 - Revolving credit does not require a specific purchase
 - Typically has significantly lower interest rates compared to credit cards
- Example: DBS



Three Types of Revolving Credit

Overdraft Protection

 A line of credit linked to a checking account that allows a depositor to overdraw the account up to a specified amount

2. Unsecured Personal Credit Line

A line of credit made available to an individual on an as needed basis

3. Home Equity Line of Credit

- A line of credit extended to a homeowner that uses the borrower's home as collateral
- Second mortgage on your home
- It provides access to a lot of relatively inexpensive credit
- You could lose your home



Home Equity Line of Credit

- Example:
- A couple buys a home for \$2,850,000
- 10 years later, it's worth \$3,650,000
- The couple now has an asset worth \$3,650,000 on which all they owe is the original mortgage, which may now have a balance of \$2,200,000.
- The amount of equity in the house is \$3,650,000 \$2,200,000 = \$1,450,000
- In order for them to tap that equity without having to sell their home, they can use the home equity credit line
- 75% loan-to-market-value ratio
- 75% of \$3,650,000 = \$2,737,500
- \$2,737,500-\$2,200,000(remaining mortgage) = \$537,500



Advantages of Credit

- Using credit increases the amount of money a person can spend to purchase goods and services now
 - Solution to the inconsistence between income and spending
- Advantages:
 - Allows us to allocate our financial resources more effectively
 - Cushion for financial emergencies
 - Grip the chance of low price
 - Convenient when shopping
 - Can take advantage of grace period
 - Indicates financial stability



Uses of Credit

- If you decide to use credit, make sure the benefits of purchasing now outweigh the costs
- Ask yourself the following questions before you decide how and when to make a major purchase:
 - Do I have the cash I need for the down payment?
 - Do I want to use my savings for this purchase?
 - Does the purchase fit my budget?
 - Could I use the credit I need for this purchase in some better way?
 - Could I postpone the purchase?
 - What are the OC of postponing the purchase?
 - What are the dollar costs and psychological costs of using credit?



Misuses of Credit

- Use your credit card to make everyday purchases
 - Using your credit card as a substitute for cash is a habit that can quickly lead to debt
- Make impulse purchases
 - Research findings suggest that emotions and feelings play a decisive role in purchasing, triggered by seeing the product or upon exposure to a well crafted promotional message
- Use your credit card to buy things you cannot afford
 - Living a borrowed lifestyle is the quickest way to get into debt.
 - If you cannot afford a purchase today, chances are you will not be able to afford it tomorrow, or even next month
- Get into the habit of making minimum monthly payments
 - To pay your debts off quicker and cheaper, you should pay as much as you can on your balance each month



Avoid the Minimum-Monthly-Payment Trap

 The minimum monthly payment is the smallest amount you can pay and still be a cardholder in good standing

It is typically the greater of HK\$50 or between 2% or 3% of the

balance

Total outstanding balance (HKD / CNY / USD)		5000		
Monthly flat rate (%)		1.5		
	RESET	CALCULATE 🔚		
	Monthly rep	Monthly repayment amount		
	Minimum payment	Fixed payment amount \$ 181		
Estimated time required to pay off the balance	121 months	36 months		
Total repayment amount	\$ 9,071	\$ 6,507		
Total outstanding balance of credit card	\$ 5,000	\$ 5,000		
	\$ 4,071	\$ 1,507		



Bank Credit Cards

- Line of credit depends on applicant's financial status and ability to pay
- Cash advances and balance transfers
 - A loan that can be obtained by a bank credit cardholder at any participating bank of financial institution
- You have the option to pay the bill in full within the grace period without interest charges
 - Some creditors allow you a grace period of 20 to 25 days to pay a bill in full
- The outstanding balance will attract interest at a relatively high rate
 - Interest rates on credit cards are amongst the highest rates charged on debt



Charges

DBS Bank (Hong Kong) Limited

DBS Credit Card Annualized Percentage Rate ("APR") Table

	APR for Standard Annual Rate						
Standard Annual Rate	Cash Advance	Retail Transaction	Merchant Categories of Internet Bill Payment / JET Payment / Bill Payment through Customer Services Hotline:				
			"Banking and Credit Card Services"/ "Credit Card Payment"/ "Credit Services"	"Security Broker"	Others		
32.00%	39.53%1	35.70% ^{2,3}	37.14%1	37.32% ^{2,4}	35.70% ^{2,2}		

	APR for Adjusted Interest Rate						
	Cash Retail Advance Transaction		Merchant Categories of Internet Bill Payment JET Payment / Bill Payment through Customer Services Hotline:				
		"Banking and Credit Card Services"/ "Credit Card Payment"/ "Credit Services"	"Security Broker"	Others			
36.80%	46.45% ¹	41.80%2,3	43.69%1	43.65% ^{2,4}	41.80%2		

Remarks:

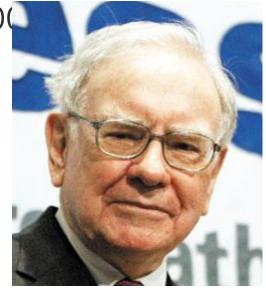
- These APRs are calculated in accordance with the guidelines issued by the Hong Kong Monetary Authority in respect of the Code of Banking Practice and
 under the assumption that the minimum payment of each monthly statement is settled before the relevant payment due date ("Basis of Calculation"). Since
 different products may be subject to different charges or fees, the same Standard Annual Rate charged on different products may result in a different APR.
- These APRs are calculated based on a modified Basis of Calculation which has taken into account the effect of the interest free period in the first statement cycle. The modified Basis of Calculation reflects the actual charging method the Bank currently adopts.
- 3. The APRs for Standard Annual Rate and Adjusted Interest Rate calculated in accordance with the Basis of Calculation are 37.14% and 43.69% respectively.
- 4. The APRs for Standard Annual Rate and Adjusted Interest Rate calculated in accordance with the Basis of Calculation are 38.89% and 45.72% respectively.
- If a Cardholder fails to pay the minimum payment shown on any monthly statement, the Standard Annual Rate will be adjusted by the Delinquency Adjustment Rate (as set out in the Fee Schedule) to the Adjusted Interest Rate.
- 6. The Bank reserves the right to vary or review the above rates from time to time subject to prior notice being served on Cardholders.

Hong Kong/CPF/DP/APR/0005(02/16)



Comparison

- How high is the finance charge on credit card balance?
- The annualized return on the Dow Jones Index from 1987 to 2012
 - 8%
- The annual return of Warren Buffett from 1967 to 20
 - 21.1%





Other Fees

- Annual fees
- Transaction fees
- Late-payment fees
- Over-the-limit fees
- Balance transfer fees
- Foreign transaction fees

Item			10		Charge	100			ALL MANY OF	
	HSBC Premier MasterCard® Credit Card	HSBC Advance Visa Platinum Card	HSBC Visa Signature Card	Platinum Card (incl. green credit card)	Visa Gold, Gold MasterCard	Visa, MasterCard	iCAN Card	US dollar Visa Gold	UnionPay Dual Currency Diamond Card	UnionPay Dual Currency Card
Annual fee			Name and Address of the Owner, when the Owner, which t	Management Committee of the Committee of	A STATE OF THE PARTY OF THE PAR	NAME OF TAXABLE PARTY.	-	70000000000		
Primary card	waived permanently	waived permanently	HK\$2,000	HK\$1,800	HK\$600	HK\$300	HK\$300	US\$80	HK\$1,800	HK\$300
Additional card (separate billing)	N/A	N/A	N/A	N/A	HK\$600	HK\$300	N/A	US\$80	N/A	N/A
Additional card (combined billing)	waived permanently	waived permanently	HK\$1,000	HK\$900	HK\$300	HK\$150	N/A	US\$40	HK\$900	HK\$150
Mobile Payments service	N/A	HK\$400	HK\$400	HK\$400	HK\$400 (applicable to Visa Gold only)	HK\$400 (applicable to Visa only)	N/A	N/A	N/A	N/A
Linked Private Label Cards					Indiamental in the constitution	I inharment in area at all	-		11.11	
Joining fee				waived				N/A		
Replacement fee	1 0		×	HK\$30		41		N/A		
Card replacement fee									0.0.	
Card replacement before renewal	waived	HK\$100	HK\$100	HK\$100	HK\$100	HK\$100	HK\$100	US\$13	HK\$100	HK\$100
Emergency card replacement	waived	waived	waived	waived	waived	HK\$195	HK\$195	N/A	N/A	N/A
Virtual card account	N/A	N/A	N/A	N/A	N/A	N/A	HK\$100	NA	N/A	N/A
Mobile Payments phone sleeve (applicable for Mobile Card in a smartphone with phone sleeve)	N/A	HKS400	HK\$400	HK\$400	HK\$400 (applicable to Visa Gold only)	HK\$400 (applicable to Visa only)	N/A	N/A	N/A	N/A
Cash advance fee										
From ATM (per transaction)		Cash advance fee of 2% plus handling fee of 3% on the amount of advance (minimum HK\$55) ¹					Cash advance fee of 2% plus handling fee of 3% on advance amount (minimum US\$7) ¹	Cash advance fee of 2% plus handling fee of 3% on the amount of advance (minimum HK\$55 for HKD sub-account/ minimum RMB 55 for RMB sub-account/		
Over-the-counter advances (per transaction)	J	Cash advance fee of 2% plus handling fee of 3% on the amount of advance (minimum HK\$80) ¹						Cash advance fee of 2% plus handling fee of 3% on advance amount (minimum US\$10) ¹	N/A	
accor (a)	Total fees and charges currently billed to the card statement plus 1% of the statement balance (excluding any fees and charges currently billed) as at the statement date (minimum HK\$50), plus overdue or overlimit due whichever is higher				•	Equivalent to the full amount of the statement balance balance (excluding any fees and diarges ou of each sub-account stat the statement da HKS50 for HKD sub-account RM 850 for RMD plus the overdue or overlimit due of each whichever is higher		e statement date (minima RMB50 for RMB sub-account due of each sub-account		
Duplicate statement Each statement	7.			HK\$30				US\$4	нк	\$30
Finance charge								may charge, without prior notic ach new transaction posted sin		
<u> </u>			The finance charge	will accrue daily and be calcul	ited at the interest rate of	f 2.625% per month	(equivaler	t to the APRs listed below)		1.007
Annualised Percentage Rate (APR)										
On purchase					36.43%					
On cash advance (inclusive of the handling					37.75%					
and cash advance fees)	- 2					_			e ince	To concern
Late charge		The amount of minimum payment due or HK\$230, whichever is the lower					NA	The amount of minin HK\$230, which For RMB s The amount of minin	ever is the lower ub-account	
Overlimit handling fee ⁴ (applicable if the current balance excluding all the fees and charges currently billed to the card statement expeeds the credit limit for the time being accipred to the card account).	HK\$90	HK\$180	HK\$180	HK\$180	HK\$180	HK\$180	HK\$180	US\$24		D sub-account/ //B sub-account
Over-the-counter payment handling fee Per transaction					HK\$20					
Foreign cheque clearing fee		HK\$100					US\$13		D sub-account/ //B sub-account	
Returned cheque/Rejected autoPay ⁵ (if drawn on banks other than HSBC)		HK\$100					US\$13	HK\$100 for HK	D sub-account/ // // // // // // // // // // // // //	
Sales slip retrieval Each photocopy	0.	HK\$30					US\$4	HK\$30 for HK	O sub-account/ 1B sub-account	
Card reference letter	8	HKS150						US\$20	1000	150
Fees Relating to Foreign Currency Transact				ies other than Hong Kong doll HK dollar personal credit card Visa/MasterCard to the	s and USD Visa Gold Card			USD Visa Gold Card)	1% of every card trans in currencies other than	action which is effect Renminbi and HK do

Computing Finance Charge

- The Average Daily Balance method (ADB) is a way of calculating interest by considering the balance owed at the end of each day of the period rather than the balance owed at the end of the week, month or year.
- If interest compounds monthly, then use the following formula to calculate interest under the average daily balance method:

$$Interest = \frac{S}{D} \times \frac{i}{P}$$

S = the sum of the daily balances in the billing period

D = number of days in the billing period

i = annual interest rate

P = number of billing periods per year (usually 12)



Example of ADB

- Assume you have a credit card that uses the average daily balance method and charges an 18% annual rate of interest.
- The table shows the transaction history and the balance for the most recent billing period.
- S = \$25100
- Interest = $\frac{25100}{30} \times \frac{0.18}{12}$ = \$12.55

Day of Billing Cycle	Beginning Balance	Charges	Payments	Ending Balance
1	-	\$ 200.00		\$ 200.00
2	\$ 200.00			\$ 200.00
3	\$ 200.00			\$ 200.00
4	\$ 200.00	\$ 350.00		\$ 550.00
5	\$ 550.00			\$ 550.00
6	\$ 550.00			\$ 550.00
- 7	\$ 550.00			\$ 550.00
8	\$ 550.00	\$ 100.00		\$ 650.00
9	\$ 650.00		-\$ 50.00	\$ 600.00
10	\$ 600.00			\$ 600.00
11	\$ 600.00	\$ 400.00		\$ 1,000.00
12	\$ 1,000.00			\$ 1,000.00
13	\$ 1,000.00			\$ 1,000.00
14	\$ 1,000.00			\$ 1,000.00
15	\$ 1,000.00			\$ 1,000.00
16	\$ 1,000.00			\$ 1,000.00
17	\$ 1,000.00			\$ 1,000.00
18	\$ 1,000.00			\$ 1,000.00
19	\$ 1,000.00			\$ 1,000.00
20	\$ 1,000.00			\$ 1,000.00
21	\$ 1,000.00	\$ 75.00		\$ 1,075.00
22	\$ 1,075.00			\$ 1,075.00
23	\$ 1,075.00			\$ 1,075.00
24	\$ 1,075.00		-\$ 100.00	\$ 975.00
25	\$ 975.00			\$ 975.00
26	\$ 975.00			\$ 975.00
27	\$ 975.00	\$ 200.00		\$ 1,175.00
28	\$ 1,175.00			\$ 1,175.00
29	\$ 1,175.00			\$ 1,175.00
30	\$ 1,175.00			\$ 1,175.00



Loan Restructuring

- New loan that replaces the outstanding balance on an older loan
 - Paid over a longer period
 - Usually with a lower installment amount
- Loans are commonly rescheduled to accommodate a borrower in financial difficulty and to avoid a default
 - Failure to make a payment
- Also called rescheduled loan



Consumer Loans

- Loans made for specific purposes using formally negotiated contracts that specify the borrowing terms and repayment
 - Education loans
 - Auto loans
 - Personal Loans
 - Other durable good loans
 - Consolidation loans
- Different from line of credit
 - One–time transaction
 - No more credit is available once repaid



Consumer Loans

Single–Payment Loan

- Specified period
 - Ranging from 30 days to a year
- Repaid in full with a single payment on a given due date
- Include the principal and all interest charges
- Can be secured or unsecured

Installment Loan

- Repay debt in a series of equal payments
- Payments includes principal and interest
- Long–term loan
 - 6 months to 10years or longer



Important Loan Features

- Loan application
 - Information about the purpose of the loan as well as the applicant's financial condition.
- Total cost of transaction
 - Finance Charges
 - Sometimes the bank may manipulate both the sticker prices and interest rates, so it is better to compare monthly payments to get a handle on total cost.
- Collateral
 - Properties or other marketable assets that a borrower offers as a way for a lender to secure the loan
- Loan Maturity
 - When the original principal amount is due
 - The cost of credit increases with the length of the repayment period
- Other consideration
 - Banks may charge a prepayment penalty



Computing Finance Charges

- 1. Single-payment loan
 - Simple Interest Method
 - Discount Method
- 2. Installment Loan
 - Simple Interest Method
 - Add–On Method



Annual Percentage Rate

- Annual Percentage Rate (APR) is a finance charge expressed as an annual rate
- APR is a true measure of the interest fees charged by credit card companies & banks.

$$APR = \frac{Average annual finance charges}{Average amount of credit used in the life of the loan} \times 100\%$$

Simple Interest Method (Single-Payment Loan)

$FC=P\times i\times T$

FC = finance charge; P = Principal loan amount;

i = stated annual interest rate; T = term of loan

Example

- How much is the finance charge and APR on a \$1,000 loan for 2 years at 8% interest rate (Assume interest is the only finance charge)
- FC = $$1,000 \times 8\% \times 2 = 160

APR on a simple interest loan will always be equal to the stated annual interest rate

 \bullet APR = (\$160/2)/\$1000 = 8\%

Receive full loan amount (\$1,000) but pay back \$1,160 (loan amount + finance charge)

Discount Method (Single-Payment Loan)

- Interest (calculated on principal) is subtracted from loan amount and remainder goes to borrower
- Finance charges paid in advance
- APR will be higher than stated interest rate
- Example
 - How much is the finance charge and APR on a \$1,000 loan for 2 years at 8% interest rate (Assume interest is the only finance charge)
 - FC = $$1,000 \times 8\% \times 2 = 160
 - Borrower receives \$840 now, pays back \$1,000
 - APR = \$80/\$840 = 9.52%



Simple Interest Method (Installment Loan)

- Calculated on outstanding balance each period
- The principal balance declines with each payment
- The amount goes to interest decreases while the amount that goes to principal increases
- Example
 - Calculate the finance charges and APR on a \$1,000 loan to be repaid in 12 monthly installments at an annual interest rate of 8%
 - Assume interest is the only finance charge



Part of each monthly payment on an installment loan goes to interest and part to principal. As the loan is paid down over time, less and less of each payment goes to interest and more and more goes to principal.

Month	Outstanding Loan Balance at Beginning of Month (1)	Monthly Payment (2)	Interest Charges [(1) × 0.00667] (3)	Principal [(2) – (3)] (4)
1	\$1,000.00	\$86.99	\$6.67	\$80.32
2	919,68	86.99	6.13	80.86
3	838.82	86.99	5.59	81.40
4	757.42	86.99	5.05	81.94
5	675.49	86.99	4.50	82.49
5 6	593.00	86.99	3.95	83.03
7	509.97	86,99	3.40	83.59
8	426.38	86.99	2.84	84.15
9	342.23	86.99	2.28	84.71
10	257.52	86.99	1.72	85.27
11	172.25	86.99	1.15	85.84
12	86.41	86.99	0.58	86.41
Total		\$1,043.88	\$43.88	\$1,000.00

Note: Column 1 values for months 2 through 12 are obtained by subtracting the principal payment shown in column 4 for the preceding month from the outstanding loan balance shown in column 1 for the preceding month; thus, \$1,000 - \$80.32 = \$919.68, which is the outstanding loan balance at the beginning of month 2.



Simple Interest Method (Installment Loan)

How much is the monthly installment?

$$P = \frac{r(L)}{1 - (1 + r)^{-n}}$$

P = installment; L = Present value of the loan; r = interest rate per period; n = number of

periods

$$$86.99 = \frac{\frac{8\%}{12} (\$1000)}{1 - (1 + \frac{8\%}{12})^{-12}}$$

Simple Interest Method (Installment Loan)

- Total amount paid over 12 months = \$86.99 x 12 = \$1043.88
- Annual interest paid = \$1043.88 \$1000 = \$43.88
- Average amount of credit used in the life of the loan = \$6582/12 = \$548.5

$$APR = \frac{\$43.88}{\$548.5} \times 100\% = 8\%$$

APR on a simple interest loan will always be equal to the stated annual interest rate



Add-On Method (Installment Loan)

- Finance charges calculated on the original loan balance
- It is then added to principal to determine the total amount to be repaid

 $= \frac{\text{Monthly Payment}}{\text{Number of payments}}$

Add-On Method (Installment Loan)

- Example
- Calculate the finance charges and APR on a \$1,000 loan to be repaid in 12 monthly installments at an annual interest rate of 8% (Assume interest is the only finance charge)
- Finance charges on the original loan amount
 - \$1,000 x 8% x 1 = \$80 Higher interest is charged than under Simple Interest Method
- Add these charges to principal
 - \$80 + \$1,000 = \$1,080
- Divide this amount by the number of periods to arrive at payment
 - \$1,080/12 = \$90.00

Add-On Method (Installment Loan)

To find the APR under Add—On Method

$$APR = \frac{2 \times n \times I}{P(N+1)}$$

APR = Approximate APR; n = Number of payment periods in oneyear

I = Total dollar cost of credit; P = Principal;

N = Total number of payments scheduled to pay off the loan $14.77\% = \frac{2 \times 12 \times \$80}{\$1000(12 + 1)}$

$$14.77\% = \frac{2 \times 12 \times $80}{$1000(12 + 1)}$$



Establishing Credit

- Open checking and savings accounts
- Get one card and make small purchases
 - Use them periodically, even if you prefer paying cash
 - Build a record of being a reliable credit customer
- Obtain small loan



Build a Good Credit History

- Not getting overextended
- Fulfilling all credit terms
- Paying on time
- Notifying creditors if unable to pay
- Being truthful



Credit Rating

- When you apply for a loan, the lender will review your credit history
- The record of your complete credit history is called your credit report or credit file
 - Name, address, birth date
 - Your employer, position, income, your previous employer, etc
- It is collected and maintained by credit bureaus
 - An agency that collects information on how promptly people and business pay their bills
- A credit rating is a measure of a person's ability and willingness to make credit payment on time
- Creditors use different combinations of the 5 Cs to reach their decisions



The 5 C's of Credit

Character

- Will you repay the loan?
- The borrower's attitude toward his or her credit obligations

Capacity

- Can you repay the loan?
- The borrower's financial ability to meet credit obligations income

Collateral

- What if you don't repay the loan?
- A valuable asset that is pledged to ensure loan payments



The 5 C's of Credit

Capital

- What are your assets and net worth?
- Ability to repay a loan if you lost your source of income

Condition

- What if your job is insecure?
- General economic conditions that can affect a borrower's ability to repay a loan



How Much Credit Can You Stand?

Debt Payment Ratio

Monthly consumer credit payments

Monthly take—home pay

- Monthly consumer credit payments (excluding mortgage) should not exceed 20% of monthly net income
- Example:
 - If you have \$10,000 income, using the 20% ratio, you should have monthly consumer credit payments of no more than \$2,000