

Melbourne Veterinary School

Care of self and others Personal financial management

Rebekah Brown and Christina Marth

rebekahb@unimelb.edu.au, christina.marth@unimelb.edu.au











Intended learning outcomes - Personal financial management



Faculty of Veterinary and Agricultural Sciences

- 1. Interpret a cash-flow budget in order to monitor personal finances and diagnose behaviours that undermine financial security
- 2. Explain and apply the principle of compounding in order to maximise savings and minimise debt
- 3. Demonstrate an understanding of financial strategies to assess and manage debt in order to return to financial security
- 4. Demonstrate an understanding of saving and investing strategies on a limited budget, as well as the benefits of setting up one low-cost superannuation fund, in order to increase financial security

Compounding

'Compound interest is the eighth wonder of the world. He who understands it, earns it; he who doesn't, pays it.'

Albert Einstein

- Works in your favour with savings and against you in debt
- Interest rates are the cost of borrowing money.
- Depositing money in the bank is similar to lending money to the bank and so you receive interest on the amount you deposit
- Taking a loan from the bank means you pay the interest

Types of interest

- Simple interest
- Interest only accrues on the principal amount that is invested or borrowed. Often the interest will accrue annually but can be more frequent.
- Example: A person invested \$200 at a simple interest rate of 5% for 2 years in an account where interest accrues annually
- Year 1 interest: $$200 \times 5/100 = 10
- Year 2 interest: $$200 \times 5/100 = 10
- Total interest over 2 years = 10 + 10 = \$20
- If you continued for 10 years, they would end up with \$300, i.e. earning \$100 interest

Types of interest

- Compound interest
- Interest accrues on the principal amount that is invested or borrowed **AND** on interest previously earned. Often the interest will accrue annually but can be more frequent.
- Example: A person invested \$200 at a compound interest rate of 3% for 2 years in an account where interest accrues annually
- Year 1 interest: \$200 x 5/100 = \$10
- Year 2 interest: $$210 \times 5/100 = 10.50
- Total interest over 2 years = 10 + 10.50 = \$20.50
- If you continued for 10 years, they would end up with \$325.78, i.e. earning \$126 interest

Simple vs compound interest

Simple interest

Year	Interest	Total Interest	Balance
May 2023			\$200.00
2023	\$5.83	\$5.83	\$205.83
2024	\$10.00	\$15.83	\$215.83
2025	\$10.00	\$25.83	\$225.83
2026	\$10.00	\$35.83	\$235.83
2027	\$10.00	\$45.83	\$245.83
2028	\$10.00	\$55.83	\$255.83
2029	\$10.00	\$65.83	\$265.83
2030	\$10.00	\$75.83	\$275.83
2031	\$10.00	\$85.83	\$285.83
2032	\$10.00	\$95.83	\$295.83
2033	\$4.17	\$100.00	\$300.00

Compound interest

Year	Interest	Accrued Interest	Balance
0	_	_	\$200.00
1	\$10.00	\$10.00	\$210.00
2	\$10.50	\$20.50	\$220.50
3	\$11.02	\$31.52	\$231.52
4	\$11.58	\$43.10	\$243.10
5	\$12.16	\$55.26	\$255.26
6	\$12.76	\$68.02	\$268.02
7	\$13.40	\$81.42	\$281.42
8	\$14.07	\$95.49	\$295.49
9	\$14.77	\$110.27	\$310.27
10	\$15.51	\$125.78	\$325.78

https://www.thecalculatorsite.com/finance/calculators/compoundinterestcalculator.php

Compounding magnifies the effect of higher interest rates

Simple Interest Projection 5 %

Projection for 10 years

Final balance

\$300.00

Interest accrued

\$100.00

Initial balance

\$200.00

Monthly interest

\$0.83

5 %

Future investment value

\$325.78

Total interest earned

\$125.78

Initial balance

\$200.00

Interest rate (yearly)

5%

Simple Interest Projection 6.5 %

Final balance

\$330.00

Interest accrued

\$130.00

Initial balance

\$200.00

Monthly interest

\$1.08

6.5 %

Projection for 10 years

Future investment value

\$375.43

Total interest earned

\$175.43

Initial balance

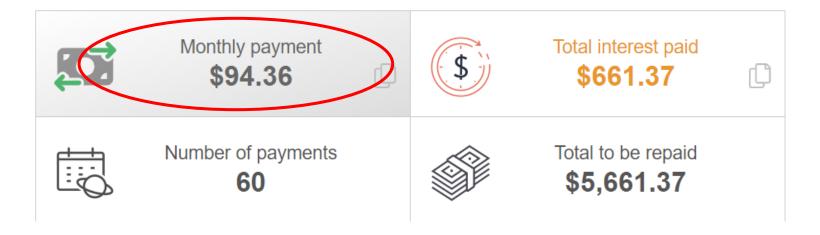
\$200.00

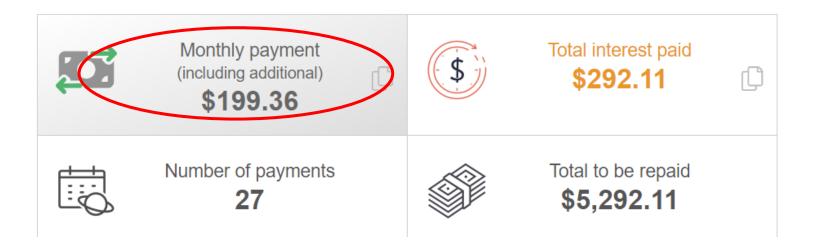
Interest rate (yearly)

6.5%

Compound interest and debt

\$5000 car loan at 5% interest compounding monthly





https://www.thecalculatorsite.com/finance/calculators/loancalculator.php

Take home messages





Compound interest helps you maximise your savings



Compounding is applied in debt repayments