St. Joseph School finlit Course
7th Grade & 8th Grade
Winter Term 2022 - 2023
February 27, 2023

Finlit Wrap-up

Class 32: Putting it All Together

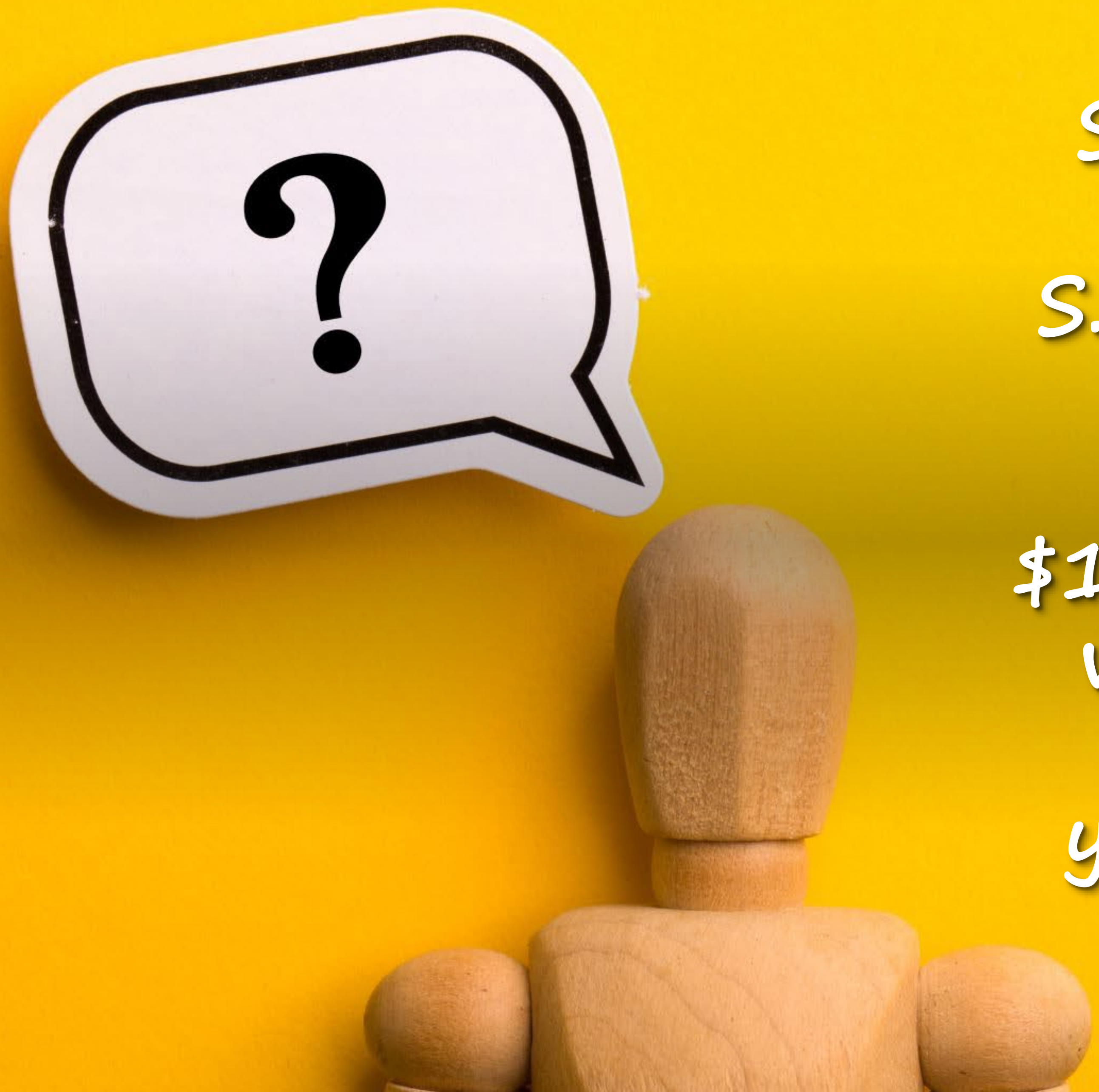
NITWOM

News In The World Of Money

02/24/2023: The U.S. Federal Reserve's preferred measure of inflation, Personal Consumption Expenditures Index ("PCE") , unexpectedly rose in January. PCE is measure differently than the Consumer Price Index ("CPI") [See How]. PCE increased 0.6% in January 2023 and was up 5.4% from one year ago. The surprise data suggests the U.S. Federal Reserve may need to keep interest rates higher for longer. [Source]

Recap: Investing

You **transfer value today**, in exchange for what you **expect to have greater value** to you **in the future.**



Suppose a young person has a S.M.A.R.T financial objective to accumulate a $100,000 portfolio within 20 years. How might the young person get started?

The Young Investor’s Dilemma

How to Begin?

Investors need *some money* to start investing, if they are to transfer value today. Young people go to school. Young people do not have much money. So, *how can young people start investing?*

Getting Money

Three ways:

1) Sell stuff for it -- trade your assets for cash,

2) Borrow it -- increase your liabilities, or

3) Make it -- generate income.

Income Types

1) Earned income = money made from work,

2) Passive income = money made from assets, and

3) Portfolio income = money made from investment appreciation

Earning Income

Generally, young people do not own appreciated investments (**portfolio income**), nor assets that generate income (**passive income**). So, *how can young people earn income when they are still students?*

Teenager Earned Income Ideas

BABYSITTER

CONTENT CREATOR

DOG WALKER

GRAPHIC DESIGNER

LIFEGUARD

OFFICE WORKER

PET SITTER

YARD WORKER

VIDEO GAMER

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Let's explore these two options

Two Earned Income Examples

Babysitter

1 child: $20 / hour; 2+ children: $25 / hour

1 evening / week for 5 hours @ $22 / hour =

<u>$5,720</u>

gross income per year

Yard Worker

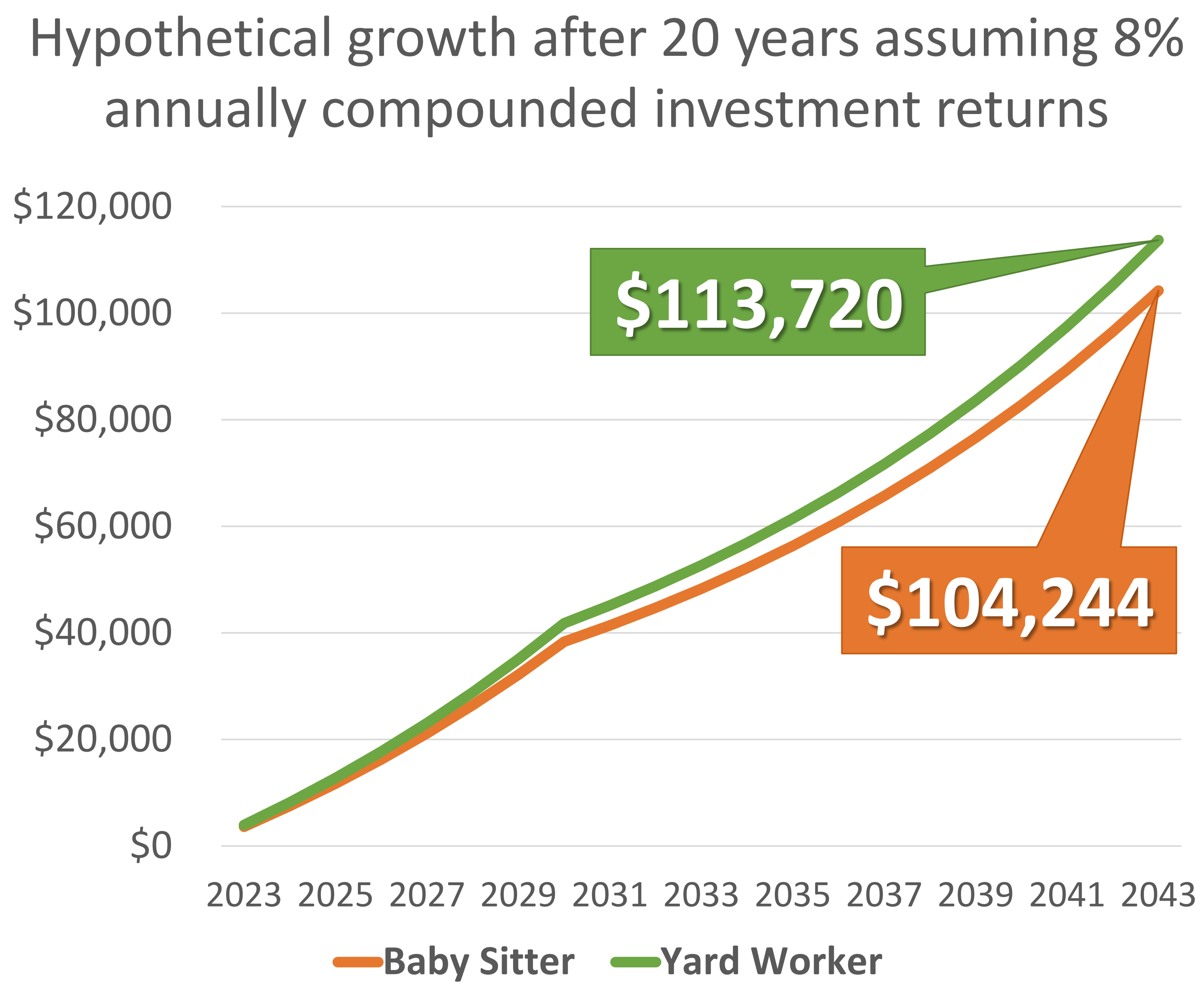
$20 / hour; $40 / mow

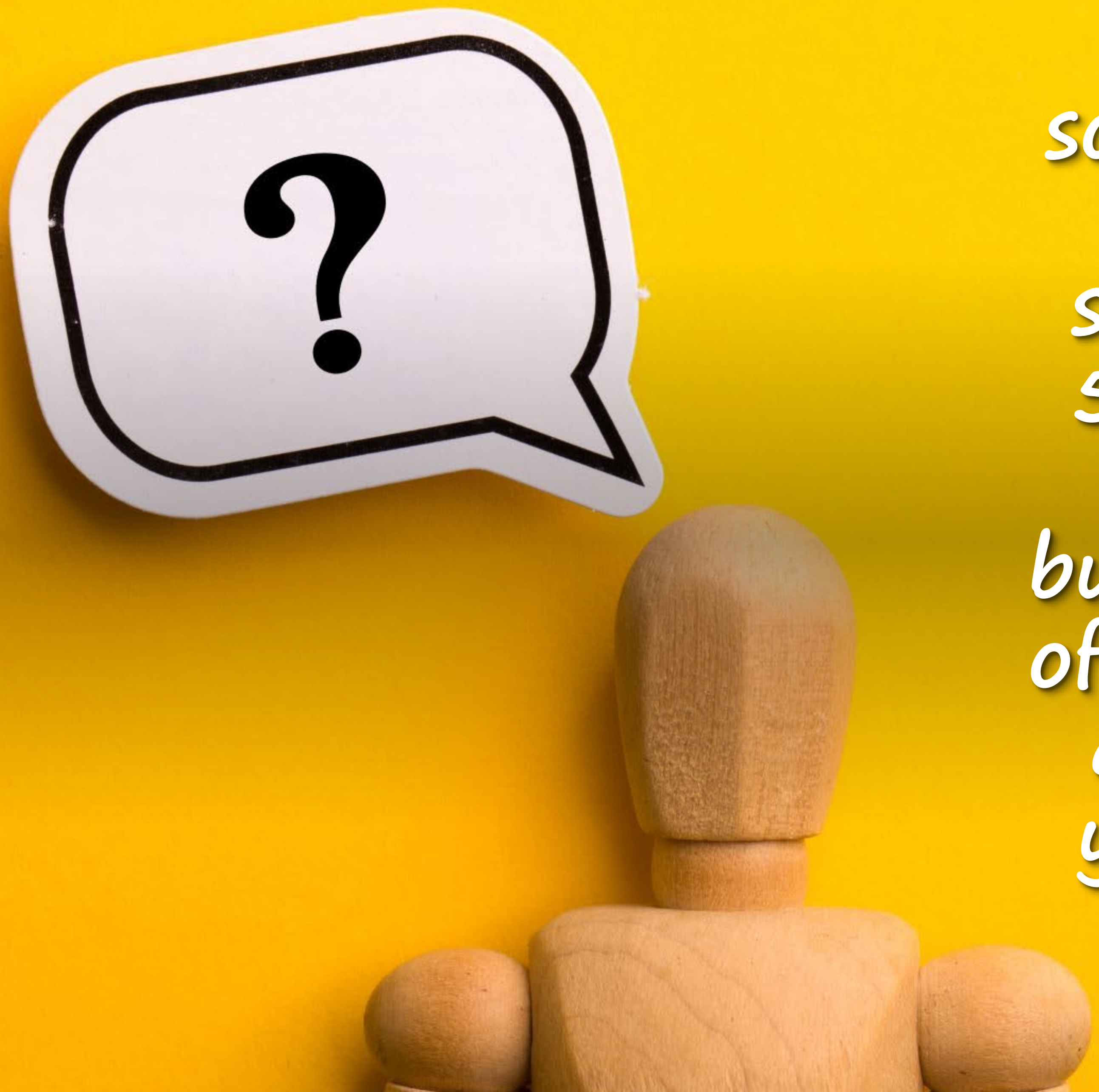
1 day / week for 6 hours @ $20 / hour =

<u>$6,240</u>

gross income per year

Do the work for **8 years. Invest 70%** of after-tax income in an **S&P 500 Index Fund** (Ex. Ticker: SPY). Estimate a 10% tax rate. **Spend** the rest on your **needs** or **wants.**





What might be some benefits to a young investor selecting an S&P 500 Index Fund, rather than building a portfolio of individual stocks and bonds? Can you think of any limitations?

S&P 500 Index Fund Benefits and Limitations

Benefits

- Mitigates single asset risks through diversification across hundreds of U.S. large company stocks
- Updates automatically when companies are added to or removed from the index
- Very low operating expenses

Limitations

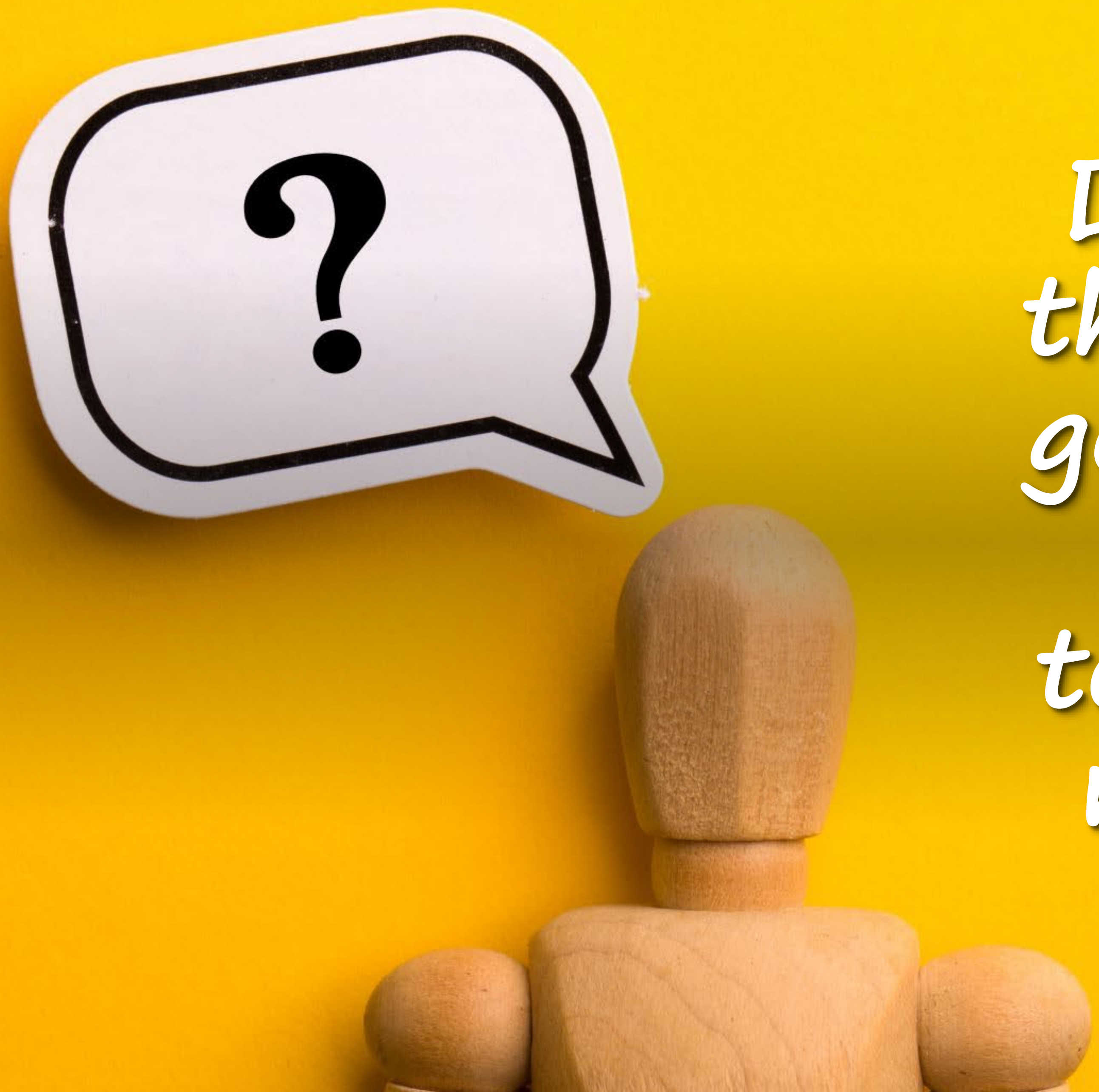
- Excludes bonds and other investments, as it is a stock only index
- Excludes international company stocks
- Excludes small and mid size company stocks
- Weights towards the largest of large U.S. companies

Credit

Extension of revolving credit, like a credit card, is a **bank's asset**. Banks want a return on their investments. Interest you pay on a credit card balance is **passive income** to banks.

Credit Card Example

- A teenager gets a credit card with a **$1,000 balance limit**.
- The **interest rate is 20% annually**. The credit card requires a **minimum monthly payment of $20** or **2%** of the balance outstanding, whichever is greater.
- The teenager purchase clothes and electronics, building up a $1,000 credit card balance.
- "$20 per month is nothing," thinks the teenager, who makes the $20 minimum monthly payment until the credit card balance is paid off.



Do you think this was this a good decision? Could the teenager have made better choices?

Credit Card Example Balance Payoff

Month #	Starting Balance	Interest Charged	Minimum Payment	New Balance
1	$1,000.00	$16.67 ($1,000 x 20% / 12)	$20	$996.67
2	$996.67	$16.61 (996.67 x 20% / 12)	$20	$993.28
3	$993.28	$16.55 (993.28 x 20% / 12)	$20	$989.87
…	…	…	…	…
109	$7.89	$0.13 (7.89 x 20% / 12)	$8.02	$0.00

- It takes **over 9 years** for the teenager to pay off the credit card.
- By the time the credit card is paid off, the clothes the teenager purchased are out of style and the electronics are obsolete.
- The teenager made **total payments of $2,168** of which **$1,168 was interest expense**.
- Interest expense to the teenager was income to the credit card company.

Credit Car... Balance Pa...

1. Credit card payments **first** pay the interest expense

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2. Only the **remainder** reduces the balance owed

3. Balances can take **years to payoff** if making only a minimum payment

- It takes **over 9 years** for the ... pay off the cr...
- By ... redit card is p... the ...lothes the teenager purchased are out of style and the electronics are obsolete.
- Th... **tal pa...** f w... **erest expense.**
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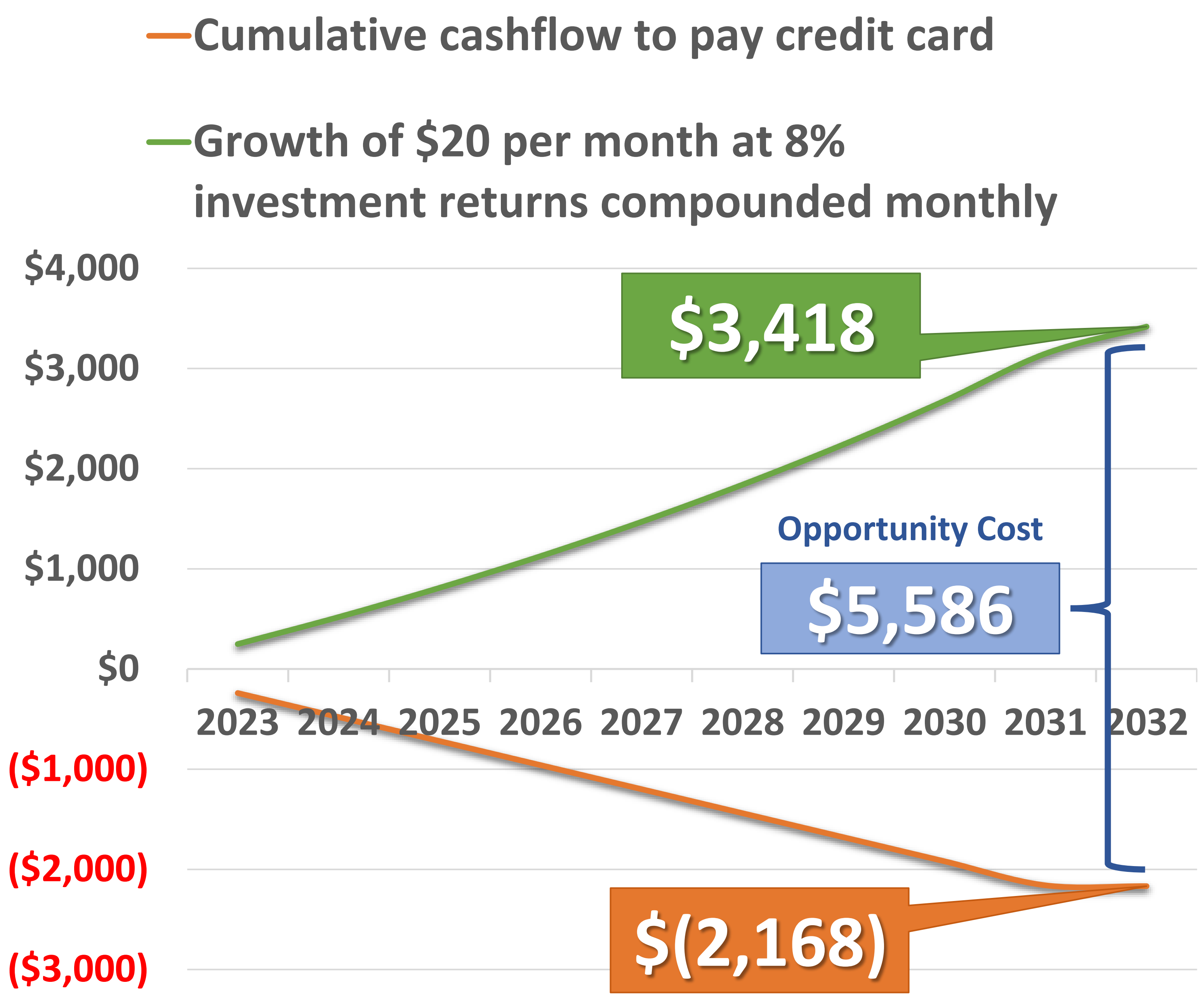
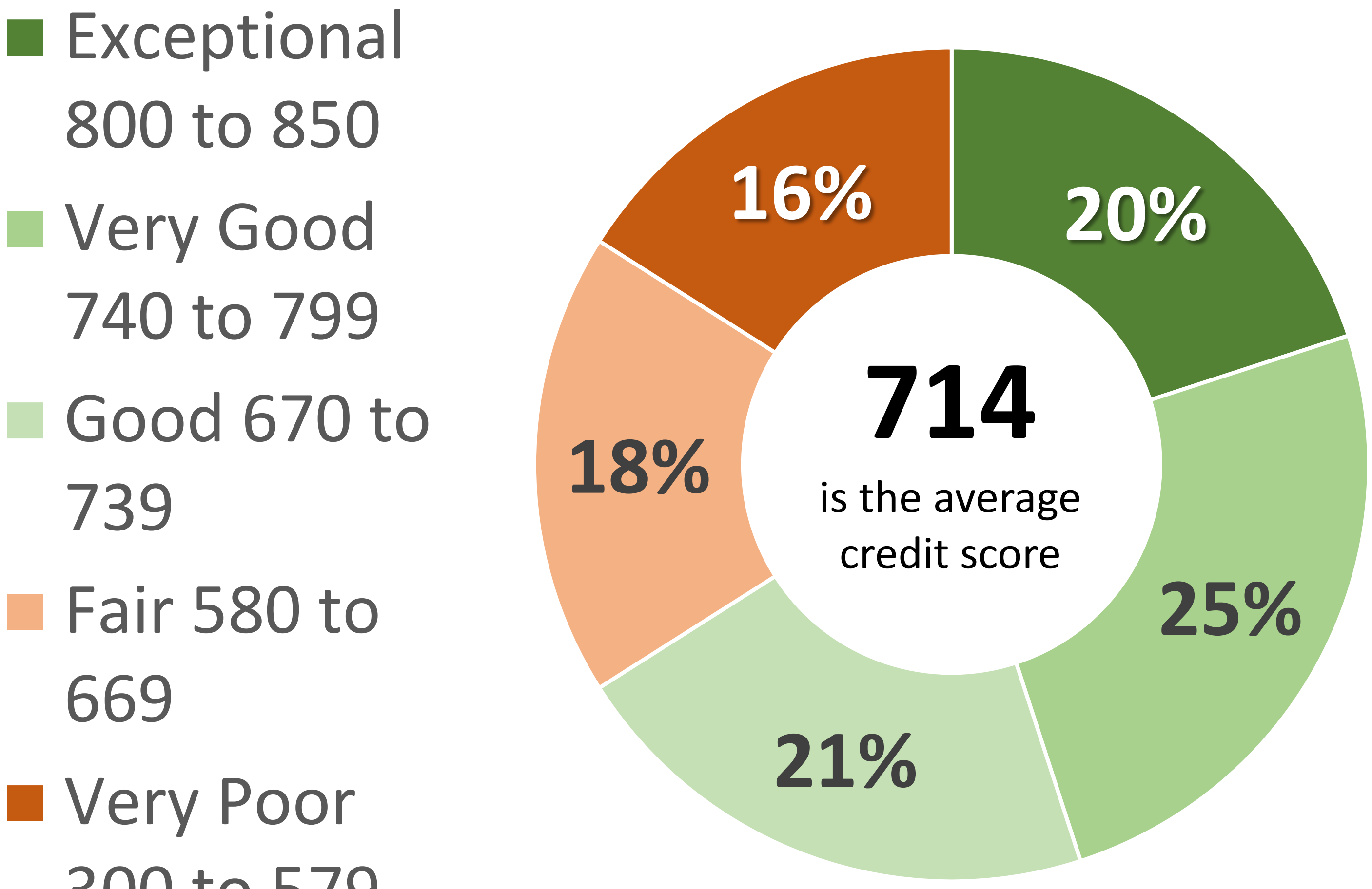
It is worse when you consider the **opportunity cost!**

How might it have turned out if the teenager **invested $20 per month** instead of building credit card debt?



Why is it important to have good credit?

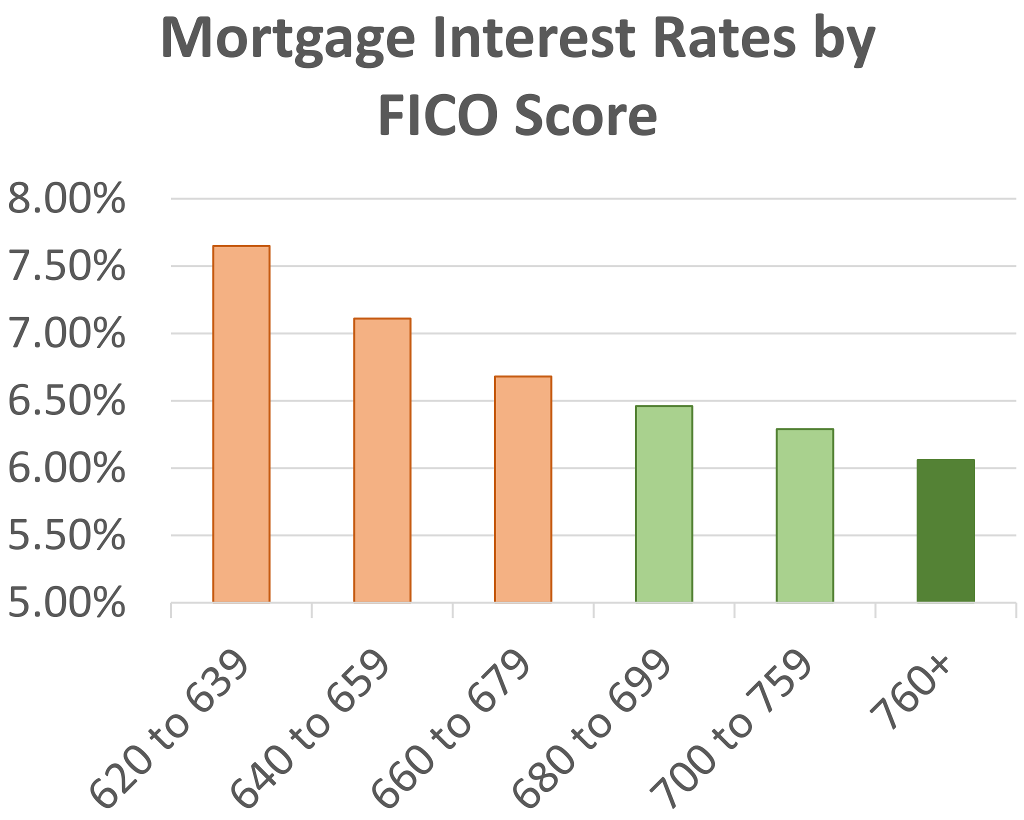
Consumer credit ratings impact the interest rates people pay for everything. A FICO Score ranges from **300 to 850.**



Why do FICO Scores Matter?

Mortgage Interest Rates by FICO Score as of February 15, 2023

FICO Score	Mortgage Interest Rate
760+	6.06%
700 to 759	6.29%
680 to 699	6.46%
660 to 679	6.68%
640 to 659	7.11%
620 to 639	7.65%
Below 620	N/A



Source: https://www.wsj.com/buyside/personal-finance/mortgage-rates-by-credit-score-287bb3d8

What's the difference on a $400,000 mortgage for 30 years?

6.06% Rate

Monthly payment:

$2,414

Less expensive by **$424 per month**, which could be invested and grow to

$632,513

presuming 8% annual returns, compounded monthly for 30 years.

7.65% Rate

Monthly payment:

$2,838

More expensive by **$424 per month**, which not only requires more monthly cash flow, but also loses the investment portfolio growth opportunity.

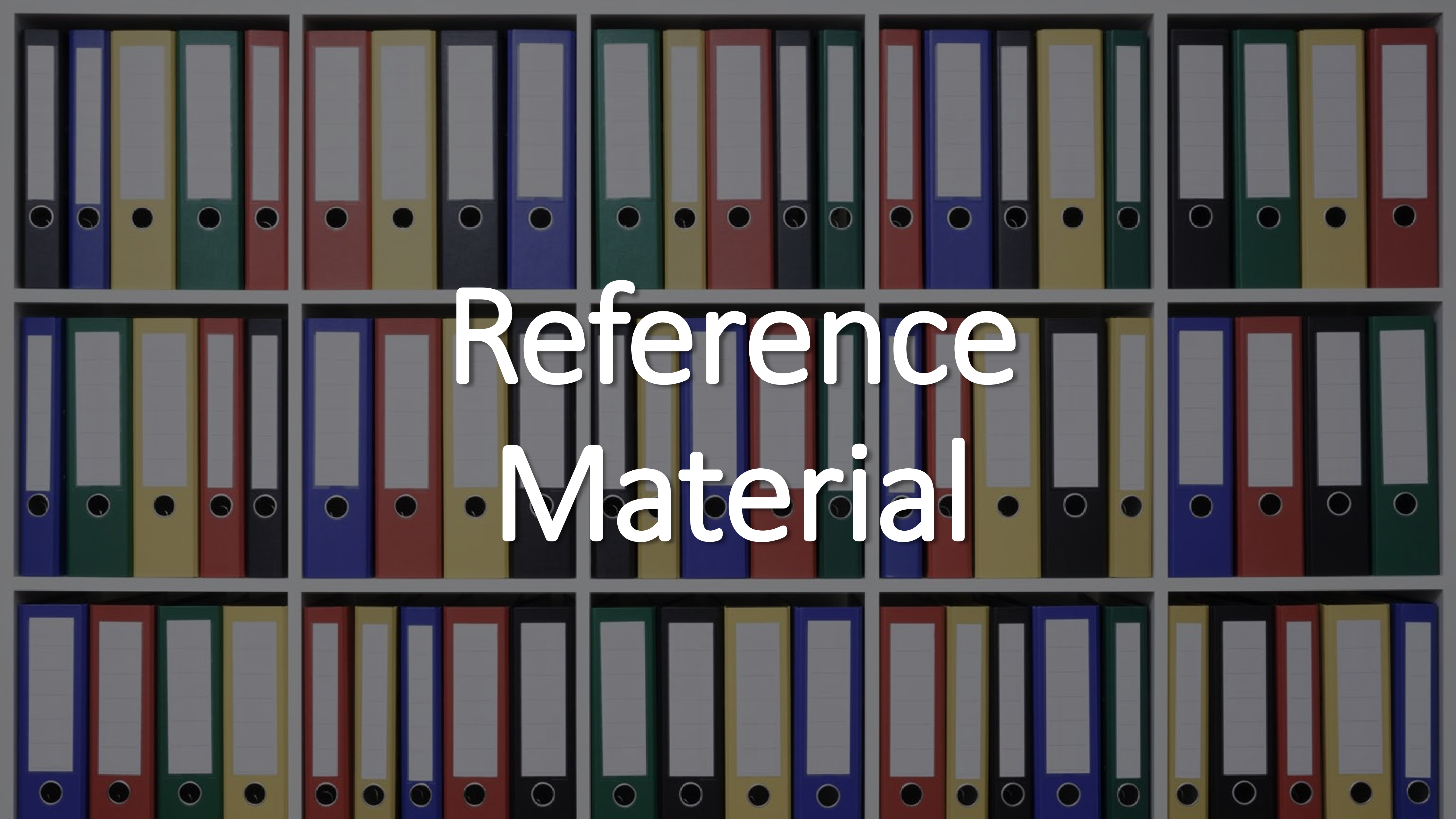
What do you think people can do to improve their credit scores?

Coming Up on Investments – Deep Dives Into…

- ☑ 1. Introduction,
- ☑ 2. Financial Objectives,
- ☑ 3. Managing Risk,
- ☑ 4. Equities (Stocks),
- ☑ 5. Fixed Income (Bonds),
- ☑ 6. Mutual Funds & ETFs,
- ☑ 7. Putting it All Together.

Key Takeaways

- We applied many of the finlit concepts you learned in this class – planning, income, investing, diversification, expenses, debt, opportunity costs, and credit.
- Don't let age discourage you from generating income or investing – it can be done, even for young people!
- Carrying credit card balances makes you a source of income for banks – don't make banks rich at your own expense!



Reference Material

Consumer Price Index ("CPI") vs Personal Consumption Expenditures Index ("PCE") [NITWOM]

CPI

- **Most widely cited inflation metric**
- Released by the **Bureau of Labor Statistics**
- Uses data from **household surveys**
- Measures goods and services bought by all **urban households**
- **Less** fluid to changing consumer preferences (ex. for substitute goods and services)

PCE

- **U.S. Federal Reserve's preferred inflation metric**
- Issued by the **Bureau of Economic Analysis**
- Uses data from **the gross domestic product report and from suppliers**
- Measures goods and services bought by all **U.S. households and nonprofits**
- **More** fluid to changing consumer preferences (ex. for substitute goods and services)