The Things You Owe & Net Worth

Class 18: Liabilities & Equity

NITWOM

News In The World Of Money

01/12/2023: The U.S. Securities and Exchange Commission (“SEC”) alleged in a complaint that crypto firms Gemini and Genesis offered and sold unregistered securities.

01/18/2023: The Producer Price Index (“PPI”) fell by 0.5% in December 2022, which was more than expected, to an annual rate of 6.2%. PPI measures the change in the price of goods sold by manufacturers. PPI is generally a leading indicator of Consumer Price Inflation.

A liability is an obligation owed to others that has monetary value

Liability Classification

Current Liability

Liabilities due within 1-year

Long-Term Liability

Liabilities due after 1-year

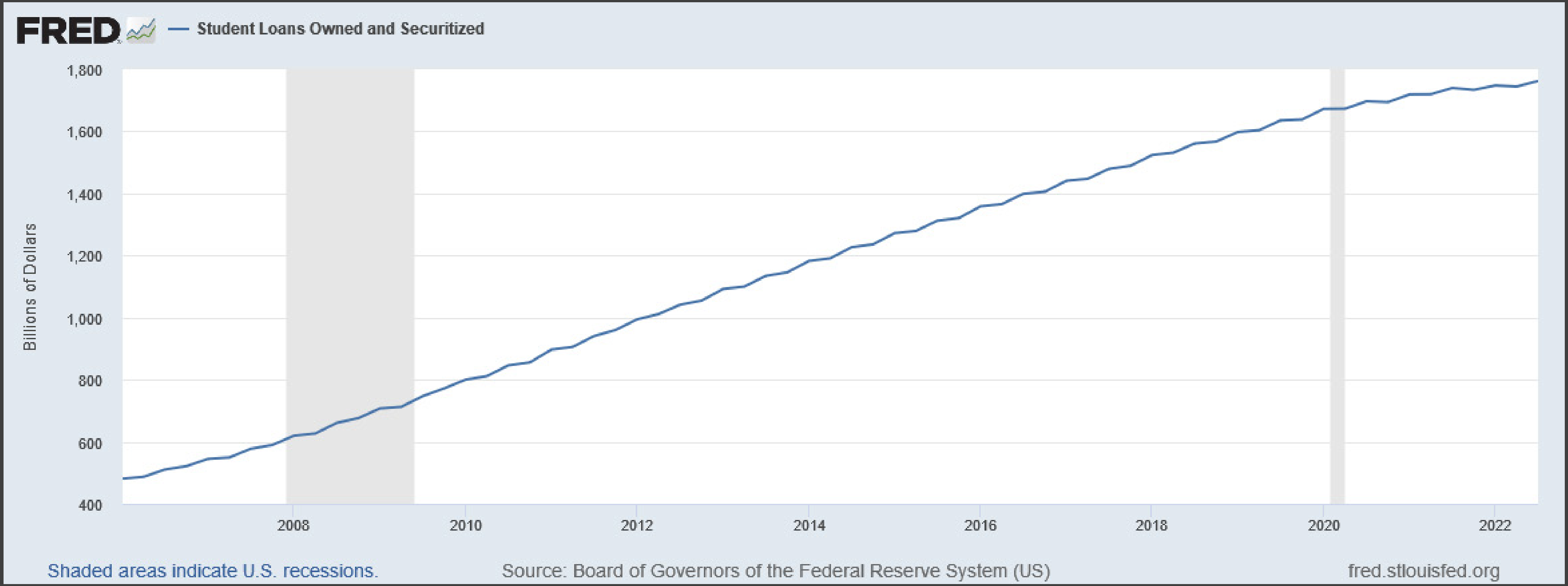
Large Group Exercise

Identify Each Liability by Classification

Liability Identification Exercise

Account payable	Automobile loan w/ 3-year Term	Corporate bond maturing in 2 Years	Corporate lease agreement with a 5-year term	Construction loan to build a Factory due in 9 months
Office equipment loan maturing in 2026	Medical bill	Home mortgage	Payday loan	Student loan
	Unsecure general-purpose loan due in 6 months	Utility bill	Visa credit card balance	

Liability Classification: **Current Liability** vs **Long-Term Liability**

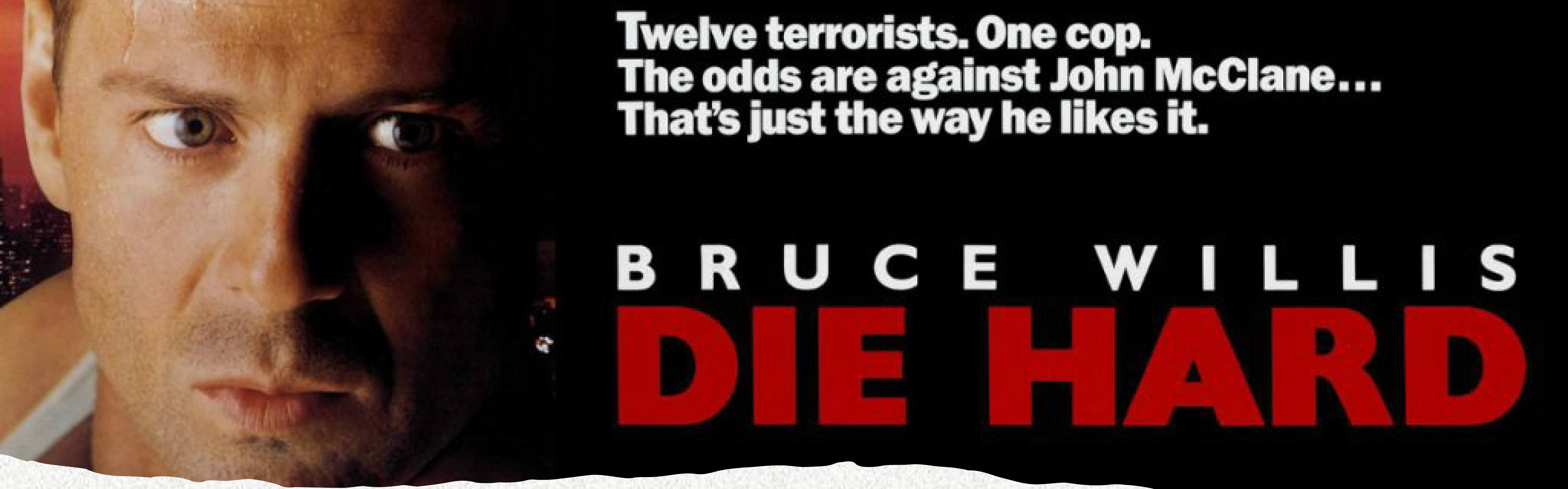


Student Loan Debt Has Grown Sharply

- Reference: Board of Governors of the Federal Reserve System (US), Student Loans Owned and Securitized [SLOAS], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/SLOAS, January 17, 2023.

Liability Origination Example: Bond Issuance

- A bond is a **type of debt security** that represents **a loan made by an investor to a bond issuer**, typically a corporation or government
- A bond issuer hires an investment bank to advise on the offering
- The investment bank underwrites the offering and sells the bond to investors who become bondholders
- Through their bond purchases, bondholders transfer money to the bond issuer, with the investment bank retaining an advisory fee
- The bond issuer receives cash, which is an asset to the bond issuer
- The bond is a **liability to the bond issuer** & an **asset to bondholders**
- The bond issuer pays periodic interest payments to the bondholders
- At the bond's maturity, the bond issuer repays the principal bond amount to the bondholders



Quick Tangent on Die Hard & Bearer Bonds*

- A bearer bond is physical certificate bond owned by the holder, or **bearer**, rather **than a registered owner**
- **Coupons** for **interest payments** are physically attached
- The bondholder submits each coupon to a bank for payment, then redeems the physical certificate bond when the bond reaches maturity

* Effectively rendered obsolete by the Tax Equity and Fiscal Responsibility Act of 1982

Debt service is the amount of money a borrower must pay, typically on a regular schedule, to satisfy its financial obligation

Servicing debt requires **cashflow in excess** of the **debt service payment amount**

When repaying loan balances, payments first satisfy loan interest, and then reduce the loan's principal balance

Residential Home Purchase and Mortgage Example

- Home Purchase
  - $500,000 purchase price
  - $100,000 down payment
  - **Mortgage Amount = ?**
  - **Home Equity % = ?**
- Mortgage Parameters
  - Annual Interest Rate = 6.50%
  - Term = 30 Years
  - Monthly Mortgage Payment = $2,528

Payment #	Mortgage Payment	Interest Expense	Loan Principal Reduction	Mortgage Balance
1	$2,528	$2,167	$362	$399,638
2	$2,528	$2,165	$364	$399,275
3	$2,528	$2,163	$366	$398,909
4	$2,528	$2,161	$368	$398,542
5	$2,528	$2,159	$370	$398,172
6	$2,528	$2,157	$372	$397,801
7	$2,528	$2,155	$374	$397,427
8	$2,528	$2,153	$376	$397,052
9	$2,528	$2,151	$378	$396,674
10	$2,528	$2,149	$380	$396,295
11	$2,528	$2,147	$382	$395,913
12	$2,528	$2,145	$384	$395,529
Totals	**$30,339**	**$25,868**	**$4,471**	

In the 1st year, 85% of mortgage payments went to interest – ***only 15% reduced the mortgage principal***

<u>Equity</u> is the **<u>net worth</u>** or the residual interest in assets after liabilities have been deducted

Relationship Among Assets, Liabilities, and Equity

Assets = Liabilities + Equity

This is the fundamental financial accounting equation.

Large Group Exercise

Determine the effect on each item listed

Assets = Liabilities + Equity

1. Liabilities increase and equity is unchanged. What effect does this have on assets?
2. Liabilities increase and assets are unchanged. What effect does this have on equity?
3. Assets and equity increase by identical amounts. What effect does this have on liabilities?
4. Assets decrease and equity is unchanged. What effect does this have on liabilities?
5. Liabilities and equity increase by identical amounts. What effect does this have on assets?

Key Takeaways

- A liability is an obligation owed to others that has monetary value
- Equity is net worth or the residual interest in assets after liabilities have been deducted
- Assets = Liabilities + Equity is the fundamental financial accounting equation

Answer Key
Assets = Liabilities + Equity

1. Liabilities increase and equity is unchanged. What effect does this have on assets? Assets increase by the same amount as the increase in liabilities.
2. Liabilities increase and assets are unchanged. What effect does this have on equity? Equity increases by the same amount as the increase liabilities.
3. Assets and equity increase by identical amounts. What effect does this have on liabilities? None. Liabilities are unchanged.
4. Assets decrease and equity is unchanged. What effect does this have on liabilities? Liabilities decrease by the same amount as the decrease in assets.
5. Liabilities and equity increase by identical amounts. What effect does this have on assets? Assets increase by 2x the amount of the increase in liabilities or 2x the amount of the increase in equity.