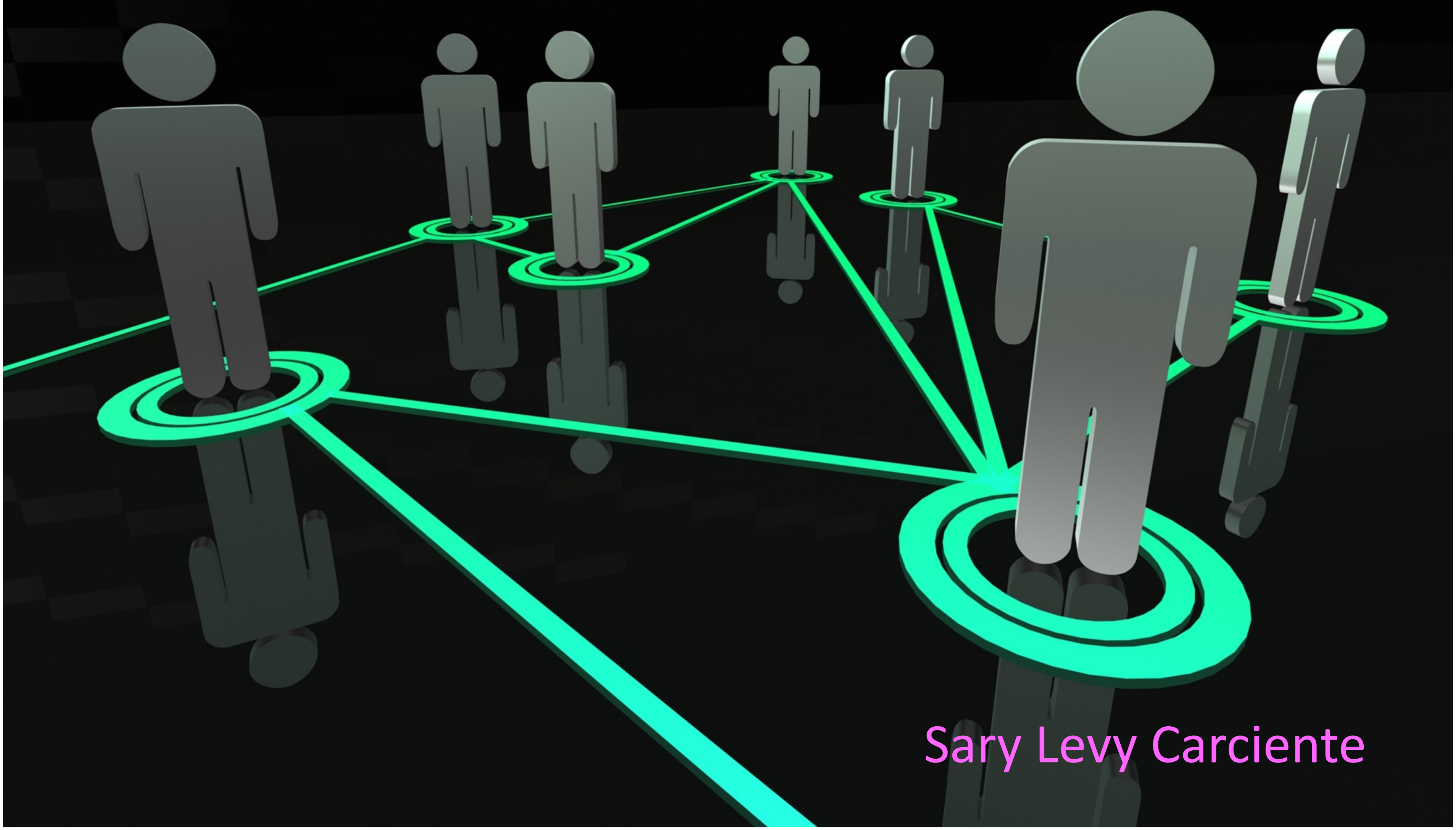
Economics & Finance Networks (some notes)

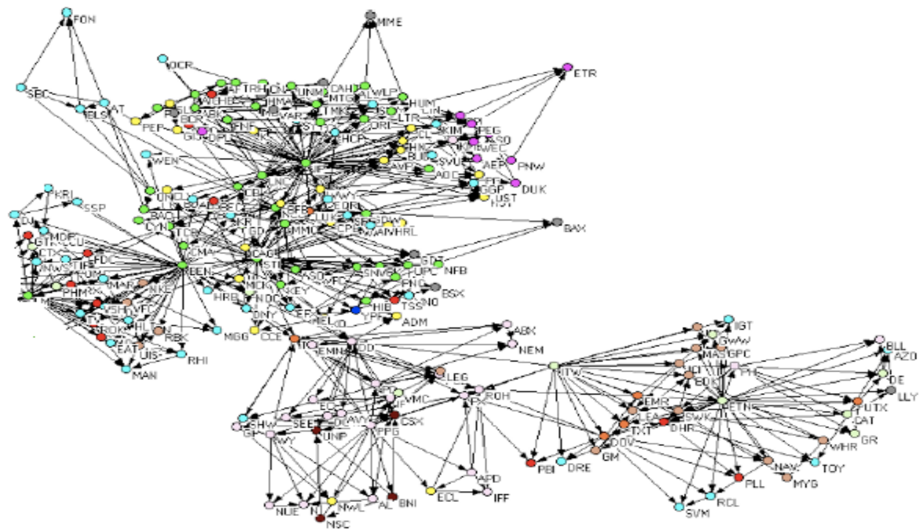


Sary Levy Carciente

Networks Why and What?

WHY?

- Interdependence
- Contagious
- Impact



- **WHAT** to check
  - Solvency
  - Liquidity

Liquidity & Solvency

- Liquidity and Solvency are terms to describe a firm's ability to honor, to pay off their debts
- Where to look find it out? **Balance Sheets**
- Fundamental accounting equation

Assets = Liabilities + Equity

Solvency

- Definition: *is the ability of a company to meet its LONG-TERM financial obligations.*
- Solvency is essential to stay in business, but a company also needs liquidity to thrive.
- A company that is insolvent MUST fill for BANKRUPTCY

Liquidity

- Definition: *is a company's ability to meet its SHORT-TERM obligations*
- If a company is illiquid, it means it doesn't have enough cash to pay off the debts it has to pay
- A company that lacks liquidity can also be forced to enter bankruptcy even if it is solvent.

Balance Sheet

- Offers a snapshot in time of a company's financial position.
- It shows company's cash position, asset levels, short- and long-term debt obligations, and others.
- For a better understanding of the financial situation of a business we use some RATIOS

Liquidity Ratios

- These ratios measure a company's ability to honor its short-term debt obligations.
- They compare company's **liquid assets** (those easily converted to cash), to its **short-term liabilities**.

Liquidity Ratios

- **Current Ratio**

Current Ratio = Current Assets / Current Liabilities

Ratio of 1.5 to 2 (or higher) is considered adequate

The higher the ratio may be a signal of cash accumulating……??????????.

Ratio <1 business may be in danger

- **Quick Ratio**

Quick Ratio = (Current Assets - Inventories) / Current Liabilities

Ratio > 1 safe…depending on the business

Liquidity Ratios

- **Cash Ratio** refines previous ratios. It only looks at the most liquid short-term assets of the company

$$\frac{\textbf{Cash + Cash Equivalences + Invested Funds}}{\textbf{Current Liabilities}}$$

Cash Ratio 1:1

Liquidity Ratios

- **Cash Conversion Cycle** expresses the time (in days) a company requires to sell inventory, collect receivables and pay its accounts payable.

CCC = DIO + DSO - DPO

DIO : Days Inventory Outsanding

DSO: Days Sales Outsanding

DPO: Days Payables Outsanding

Liquidity Measure

- **Working Capital:**
- Difference between current assets and current liabilities.
- It is a measure of company's efficiency and its short-term financial health.

Working Capital = Current Assets - Current Liabilities

Solvency Ratios

- How well a company can deal with its long-term financial obligations and develop future assets.
- A company weighed down with debt is a less favorable investment than one with a minimal amount of debt on its books.

Solvency Ratios

- **Debt/Equity**

Debt-to-Equity Ratio = Total Liabilities / Shareholders' Equity

It is a ratio of what is owed to what is owned. The lower the ratio, the most favorable

- **Debt/Assets**

(Short Term Debt + Long Term Debt) / Total Assets

MacroPrudentials

Bank for International Settlements

Basel Commitee of Banking Supervision (1975)

Basel Accord I *(1988)*

Capital Ratios to Assets (8%)

Core Principles for Effective Banking Supervision

Basel Accord II *(2004)*

New Capital Adequacy Framework

Include Credit Risks and Operational Risk

MacroPrudentials

After SubPrime crisis (2007):

Basel Accord III *(2008)*

Increase of quantity and quality of capital, depending on the economic cycle moment (13%)

More demanding Regulation for liquidity and systemic risk:

Liquidity cover Ratio (LCR) ***Net Stable Financing Ratio (NSFR)***

Agency rating conflict of interests

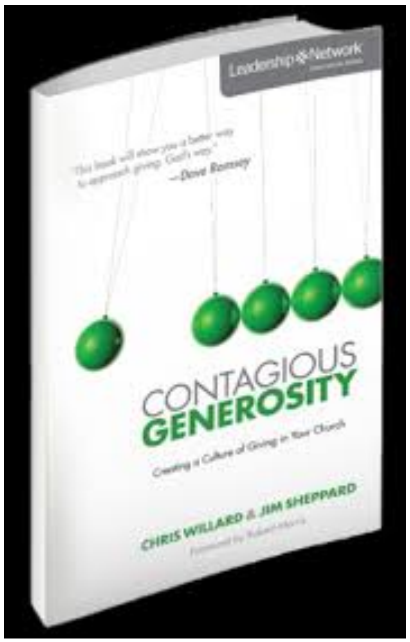
Models of Banks Business

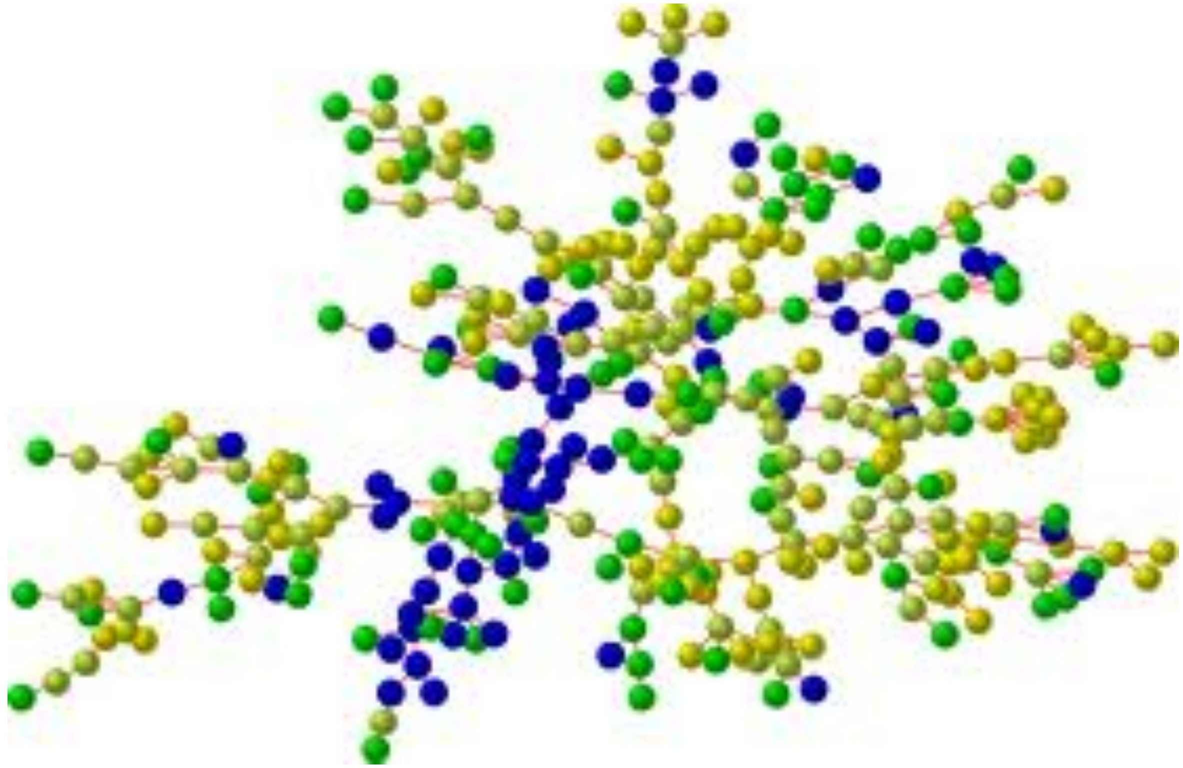
Dodd-Frank Act *(july 2010)*

Create a Sound Economic Foundation to Grow Jobs, Protect Consumers, Rein in Wall Street and Big Bonuses, End Bailouts and Too Big to Fail, Prevent Another Financial Crisis

Networks to address this problems?

- Liquidity:
  - Interbank Payment Networks
- Solvency:
  - Bipartite Networks
- Contagion:
  - Both





Thanks for your attention