Why we should care about systemic risk in our portfolios

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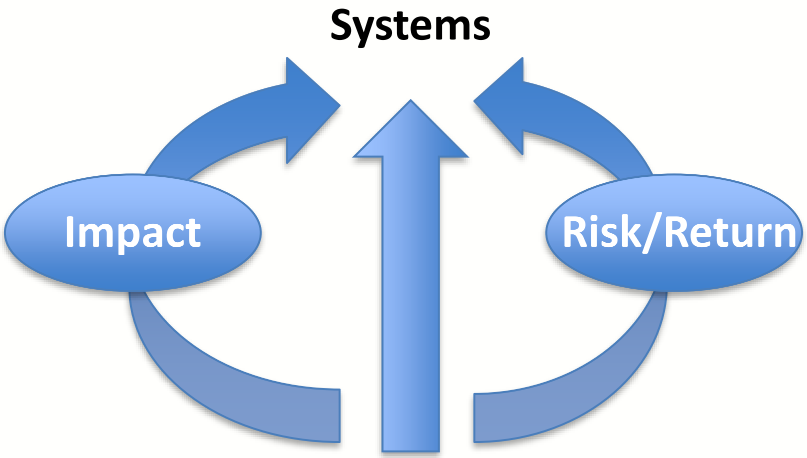
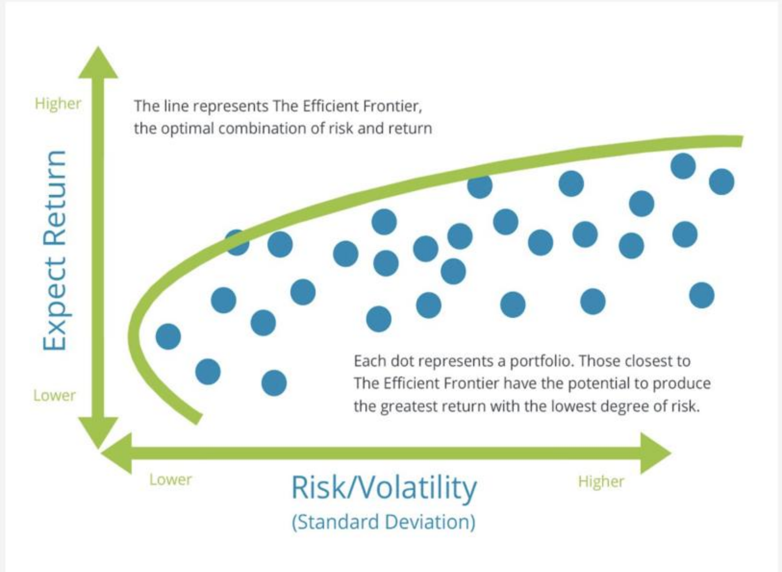
Different starting points, same conclusion



As fiduciaries, we're going to follow the risk/return path to comply with the duty of loyalty

MPT was a revolution

Evolves to



Revolutions have consequences

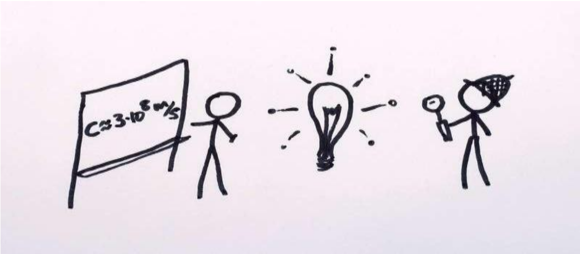
FINANCIAL

- Market for pre-packaged diversification turbocharges institutionalization of asset management industry (mutual funds)
  - 92% retail when Markowitz wrote; almost reversed today
- Lays intellectual groundwork for mutual funds, index funds, UCITs, ICAVs, etc.

LEGAL

- MPT (diversification) written into laws and regulations. Some examples:
  - Trust law
  - Ending of American state’s “legal lists”
  - Indiana could not invest in stocks until 1997
  - SEC "Names Rule" requires "appropriate broad-based securities market index"

Three Enabling Theories

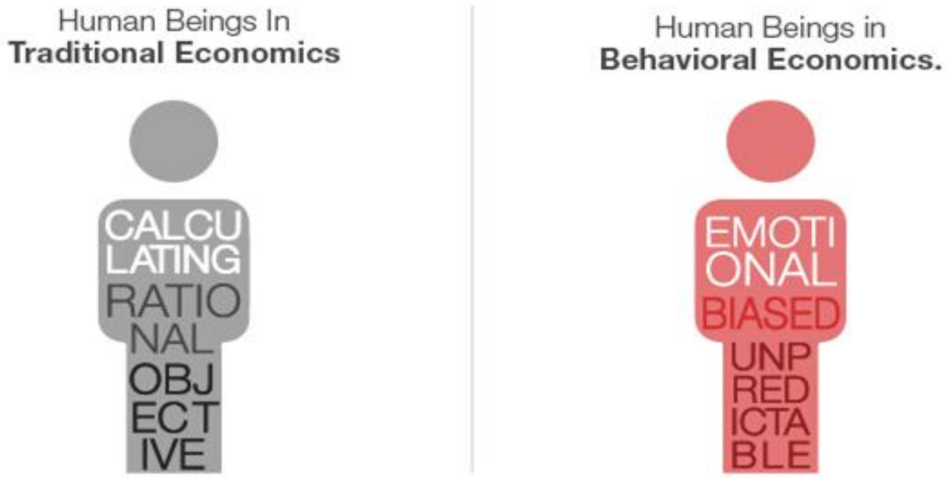


- Rationality (homo economicus)
- Random walk theory
- Efficient market hypothesis (in all its forms)

Create One Perfect Myth

- Easy to understand
- Powerfully explanatory
- **Wrong**

2 Different Species?

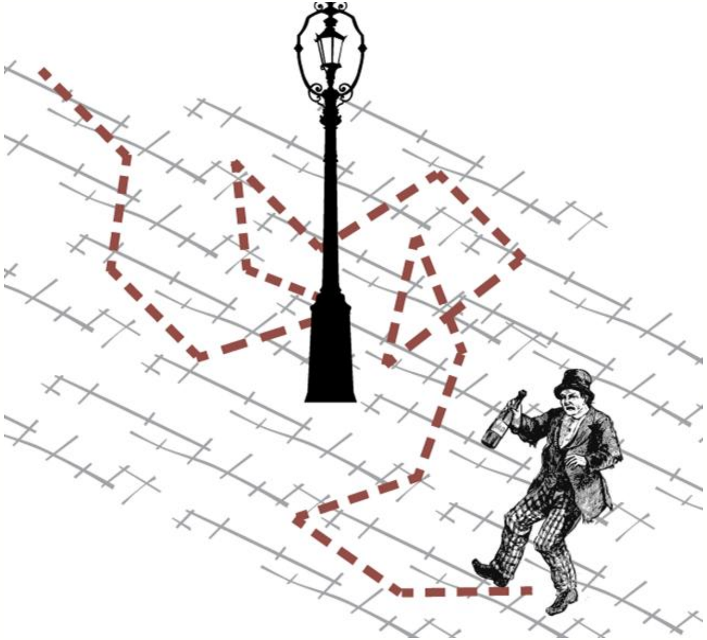


Rationality =

Risk adverse (Markowitz)

Vs.

Prospect Theory = Loss adverse (Kahneman & Twersky)



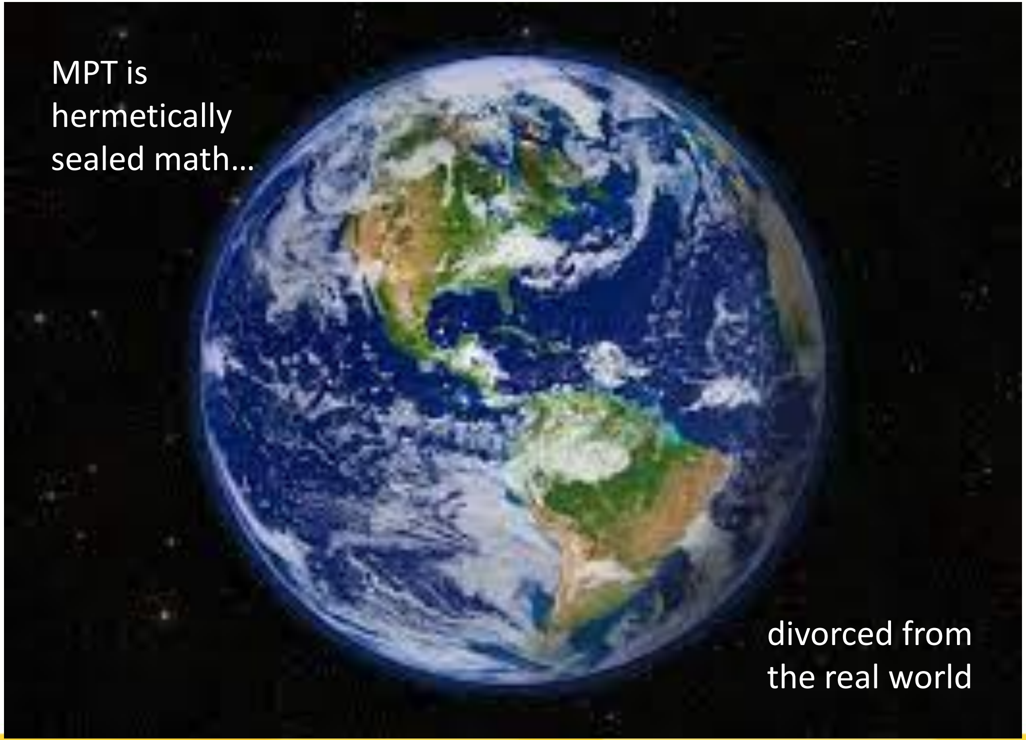
Random Walk

- Path dependency (eg momentum strategies)
- Loss aversion (a type of path dependency)
- Financial intersectionality (contagion)

EMH: Widely assumed. Weak logic. Weaker evidence.

- **Information (in)efficiency**
- Assumes price takers
- Why is there arbitrage?
- No need for insider trading law?
- Friction
  - Taxes
  - Limited liquidity

- **Fundamental value (in)efficiency**
- Even if information flowed, that's not enough.
- Information would have to lead to knowledge.
- Knowledge to comprehension.
- Comprehension to action.


MPT is
hermetically
sealed math…
divorced from
the real world

Volatility becomes dominant measure of "risk"

Diversification sole MPT tool for mitigating risk

Causes of volatility not relevant

Begins the divorce of financial markets from the real economy

MPT is artificial and nearly singular among important financial-economic theories in viewing investing as disjoint from the real world causes of value (and risk) creation.

What is risk?

- How do you define investing risk?

What is risk?

- How do you define investing risk?
- For whom?
  - An academic?
  - An asset manager?
  - An asset owner?

What is risk?

- For MPT, risk is **volatility**.
- For portfolio managers, risk is **underperformance vs. benchmark.**
- For the beneficial investor like a pension fund, risk is **not having adequate assets to fund liabilities/desires.**

For MPT and managers, risk is self- referential

- Relative returns and benchmarks
  - Beta = 1.0
  - What that 1.0 represents changes
- Unaligned with real world purpose of paying for liabilities (retirement, college, vacation, day-to-day needs, etc.)
- If a portfolio manager outperforms by 200 basis points in a down 10% market:
  - The portfolio manager has outperformed
  - You still only have 92 cents on the dollar.

MPT is a great tool to extract the best risk/return portfolio. But…

It’s static. It takes the market as a given.

Economic rationality
Efficient market hypothesis
Random walk theory

The MPT paradox

One-way valve

MPT says markets affect your investments, but….
Your investments do not impact the market.

Systematic factors determine

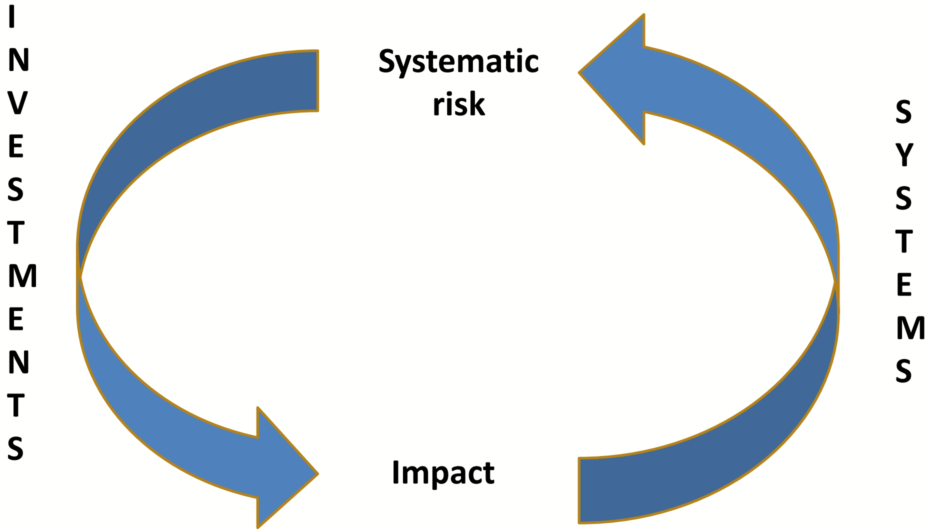
75-94% of your return

Effectively, MPT says:

Focus on what matters least.

MPT focuses investors on trading, rather than systemic issues that create systematic risk.

All investments have impact

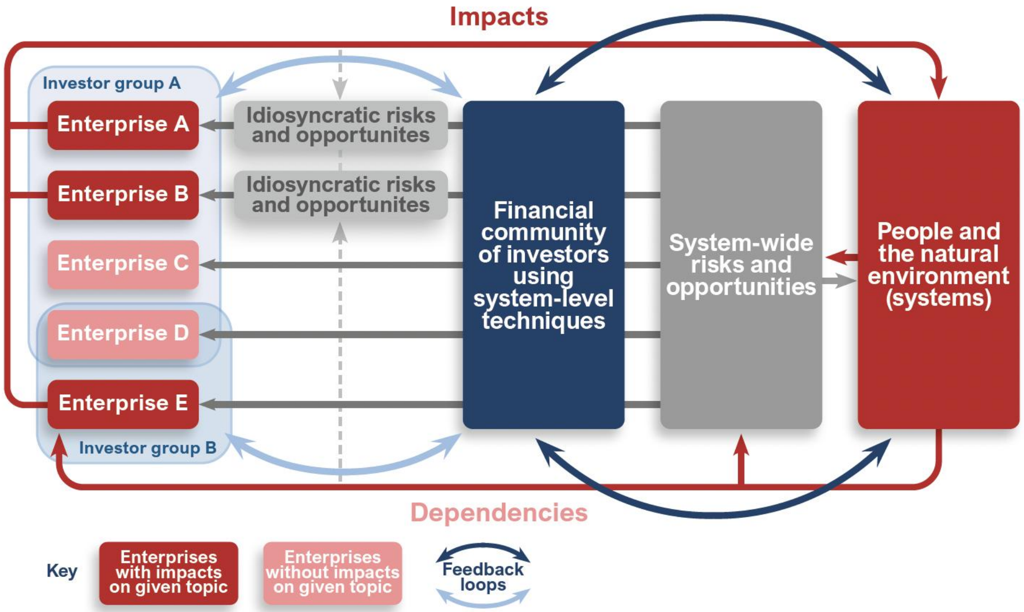


Unintentional impacts:

- Risk on/Risk off markets
- Index effects
- Super-portfolios

Why didn't Markowitz see it?

- 1952: 92% retail
- Today: 90%+ institutional



Source: Adapted from The Imperative for Impact Management, Impact Management Platform.

Your Portfolio

Capital Markets

Economy

Financial System

Environmental System

Social System

Today's investors intentionally seek to impact systems

- **MPT**
  - Risk/opportunity target: Idiosyncratic risk
  - Technique: Diversification
  - Playing field: Capital markets
  - Goal: Least mean variance portfolio
- **System-level investing**
  - Risk/opportunity target: Systematic risk
  - Technique: Mitigate risks to environmental, social and financial systems
  - Playing field: Real economy/society
  - Goal: Improved overall market risk/return profiles

Today’s investors intentionally seek to impact systems

- **PGGM - Dutch pension manager (EUR 327 billion)**
  - From 2D to 3D
    - Risk. Return. Impact
    - The new future for active management?
- **UPP - Canadian pension fund (C$ 11 billion)**
  - “As a long-term investor, UPP has a responsibility to promote the health of the capital markets and the financial, social, and environmental systems on which capital markets rely.
    - Value and risk are created in the real world. They are priced and harvested in the capital markets.
    - Long-term, financial value creation can be sustainable only if it is a subset of societal value creation,
- **HESTA – Australian Superannuation System (A$ 68 billion)** "By managing systemic risks (such as climate change), integrating responsible investment factors, catalysing innovative investments and being a 'gutsy advocate' for a fair and healthy community, we can deliver strong, long-term returns for our investors."

The idea is to shift the investible universe "up and to the left"

Some of the tools of system-level investing

Investment Enhancement

- Stewardship/Corporate Engagement
  - Across systemic risks
  - Across industries
- Asset allocation / Utility of asset class
- Security selection
- Manager selection
- Diversity of approaches
- Standard setting
- Solution creation

Opportunity Generation

- Additionality
- Locality
- Evaluation
- Utility

Field Building

- Thought leadership/interconnectedness
- Polity
- Self-organization

Severe inequality is a systemic risk.

- Decreased economic growth
- Deeper, more frequent recessions, less resilience
- Increased instability, political unrest, country risk

Severe inequality is a systemic risk.

Decreased economic growth

For the median country in the world… a 1% increase in the Gini coefficient decreases gross domestic product per capita growth over a five-year period by more than 1%. (World Bank 2018)

If the income share of the top 20 percent (the rich) increases, then GDP growth actually declines over the medium term… In contrast, an increase in the income share of the bottom 20 percent (the poor) is associated with higher GDP growth. (IMF 2015)

By redistributing income from lower-income households that spend money to higher-income households that have the luxury to save money, the rise in inequality was reducing growth in aggregate demand by about 1.5% of GDP annually in the years preceding the 2020 recession. (Economic Policy Institute 2022)

Severe inequality is a systemic risk.

Deeper and more frequent recessions; less resilience

More inequality equals more risk of long-term instability in the economic system. (Moody's Analytics, 2017)

(W)hat separates growth miracles from laggards—is the ability to sustain growth. The question then becomes: what determines the length of growth spells, and what is the role of income inequality in duration?… We find that longer growth spells are robustly associated with more equality in the income distribution. (IMF 2011)

High level of inequality is associated with more frequent recessions and what economic gains had occured are more likely to be reversed, often disproportionately affecting low income populations. (Ostry et al, 2019)

Severe inequality is a systemic risk

Increased instability, political unrest, country risk

Inequality fuels perceptions of unfairness, lack of social mobility potential, leading to political instability and even violent conflicts (37th IARIW General Conference, 2022)

How: Transmission Mechanisms

Decreased Economic Growth

- Since 1979, income share has risen for the top 10% (US) but fallen for the rest. By 2018, the top 1% were securing 16.4% of pre-tax and benefits income, up from 8.9% in 1979. And they were saving 30.6% of their income, over 60 times as much as the bottom fifth of households. This, in turn, often constrained overall economic growth by reducing economywide spending. (EPI 2022)

- Higher inequality lowers growth by depriving the ability of lower-income households to stay healthy and accumulate physical and human capital (Galor and Moav 2004; Aghion, Caroli, and Garcia-Penalosa 1999). For instance, it can lead to under-investment in education as poor children end up in lower-quality schools and are less able to go on to college. As a result, labor productivity could be lower than it would have been in a more equitable world (Stiglitz 2012). (IMF 2015)

How: Transmission Mechanisms

Deeper and more frequent recessions; less resilience

- Rising inequality enables investors to increase their holding of financial assets backed by loans to workers, resulting in rising debt-to-income ratios and thus financial fragility. (Kumhof and others 2012)
- Higher inequality in advanced economies was associated with the global financial crisis by intensifying leverage, overextension of credit, and a relaxation in mortgage-underwriting standards (Rajan 2010)
- People left out of perceived good economic times choose to borrow to “keep up”. Increased household credit increases the risk of economic crises (EPI, 2019)
- An interesting set of facts:
  - 5 recessions (US) 1969-1990 increased deficit to GDP ratio by average of 2.6%.
  - The last 3 recessions, 2001-2020 increased ratio by average of 9.4%
  - Higher inequality > higher leverage > increased need for intervention.
  - Probable result = slower future growth as resources directed to debt service

How: Transmission Mechanisms

Instability, political unrest, country risk

- "Both long-standing differences in income inequality between countries and changes in inequality within countries over time are negatively related to trust in institutions."(Bientsman, 2023)

- 50% of the profits earned by multinational corporations abroad are booked in low-tax countries through tax machinations. This starves the public sector and decreases resources needed for social cohesion. (Various, inc. NBER Working Paper 30086, 2022)

How Bad Is It?

- About 1% of the world's population controls 50% of the wealth
- The richest 1% have more than twice as much wealth as nearly 90% of the people in the world combined (6.9 billion people).
- In the U.S., wages grew six times faster for the top 1% between 1979 and 2019 than for the bottom 90%.

How to mitigate could be a graduate course

TIIP's Five Key Steps for System-level Investors*

1. Set goals - This is a key for trustees and for aligning the entire organization
2. Decide where to focus
3. Allocate assets
4. Apply investment tools
5. Evaluate results

*There were originally six steps. I have combined "investment tools" and "advanced techniques"

See also:

Task Force on Inequality and Social-related Financial Disclosures (www.tisfd.org)

QUESTIONS?