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MScSM
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Why Investments in Renewable Energy Might Have a Minsky Moment? Learning Lessons from Recent Financial Crises (Dotcom and Subprime)

About the Research

Objectives: i) generate awareness and healthy skepticism of potential risks in sustainable investments and, ii) consider potential predictors to adopt preventive measures

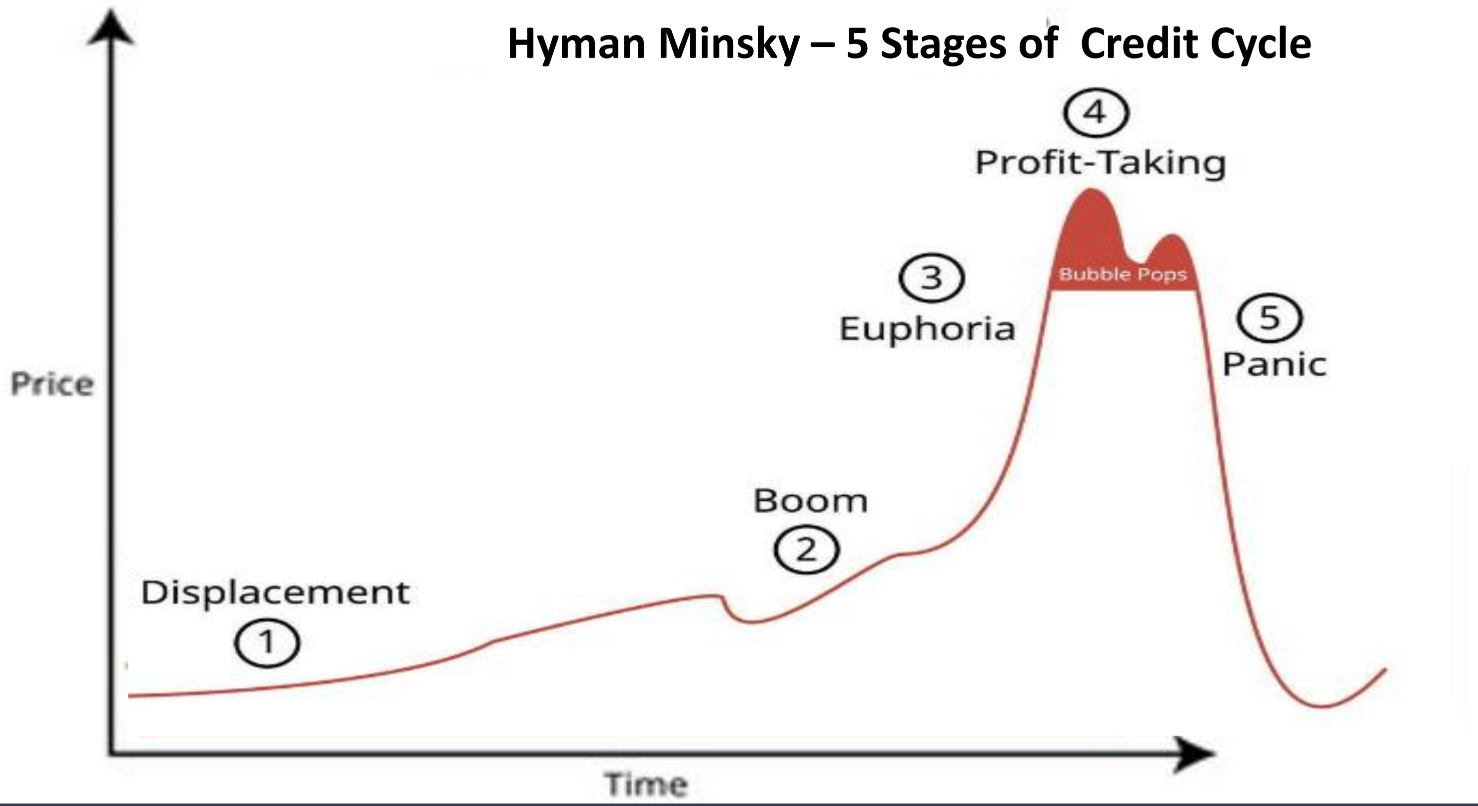
Methods: i) literature review on sustainable finance, financial crises and Minky's economic theory, combined with ii) case study comparison between Dotcom and subprime crises and current trends in renewable energy (20 largest companies by market cap globally) based on Minsky's 5 stages and identifying new subcategories. FactSet was used as the main source of information

Financial Crises

Events generated by the inter-influencing ''strategic actions of buyers, sellers, bankers, and government agencies'', beyond mere explosions of irrationality

Dotcom: New cultural and economic model based on technology

Subprime: Financial adaptation through unclear risky instruments



Sustainable Finance (SF)

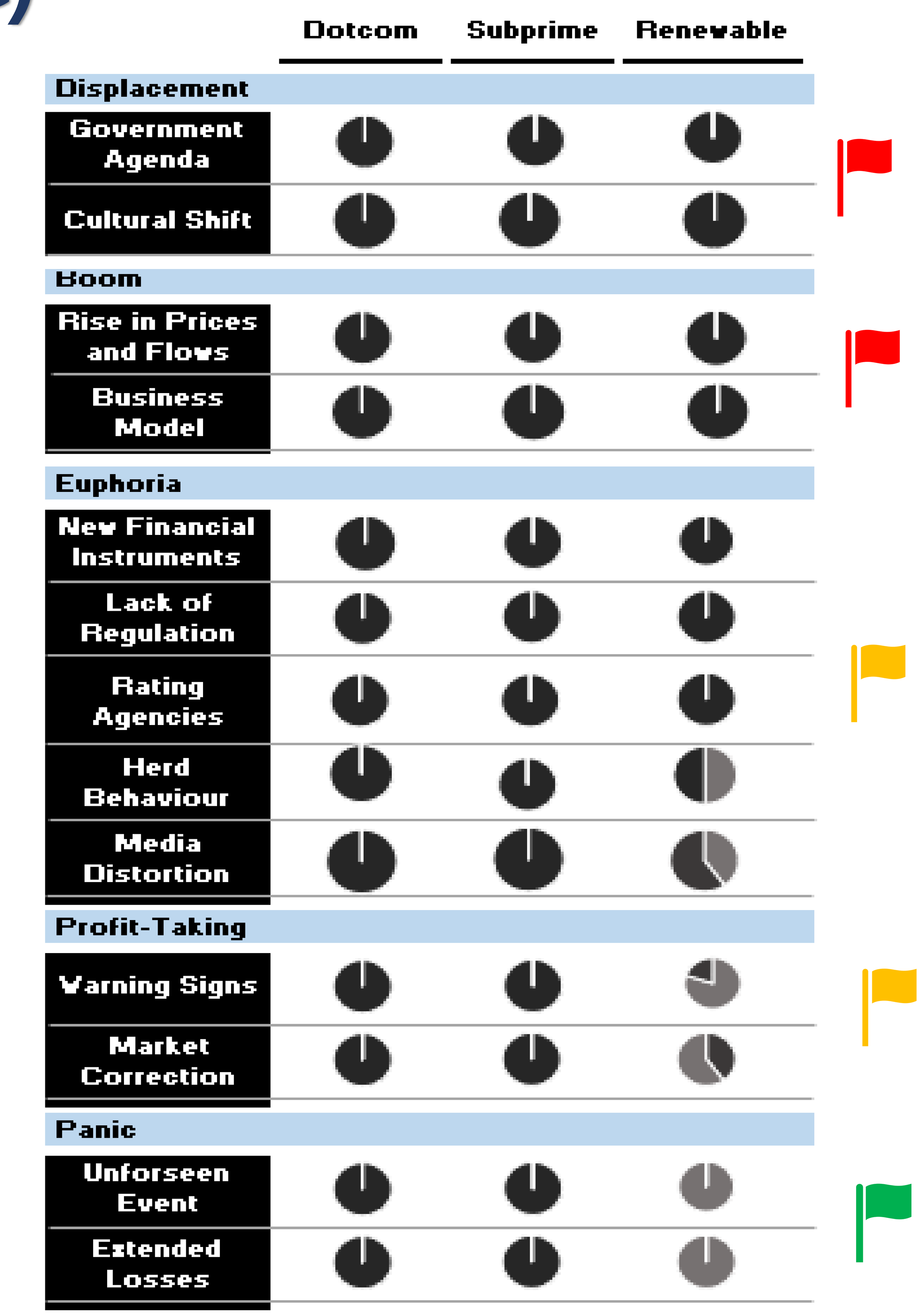
Definition: Channels financial flows to economic activities that meet present needs without compromising future generations by fostering a resource-efficient, low-carbon, inclusive, and resilient economy

Benefits: "safe haven" in shocks, financial resiliency, moral capital, trust and mitigator in litigation processes

Main products and features:

FIXED INCOME	EQUITY	ALTERNATIVE INSTRUMENTS
Green & Blue Bonds	IPOs	Social impact Bonds
Green & Sustainability Linked Loans/bonds	Mutual Funds	Development Impact Bonds
Transition Bonds	ETFs	Project Finance

- Taxonomies (green classification systems) exist globally
- ESG investment indexes (S&P) and ratings/scores (MSCI, Sustainalytics, ISS)
- Holistic conception of valuation (return + ESG risks)



Renewable Energy Case Study

- Global new investment in RE skyrocketed to USD$358 billion in the first six months of 2023
- Higher gains than most major stock market indices since 2018 and better performance than the overall sector
- 45% of these companies were diversified in terms of their portfolio of products (3+ products or produced energy) and the rest are concentrated mainly in solar (25%) and wind (20%)
- **ROA** exhibited volatility, opposite to the historic price trend of growth. It is worth highlighting hydro stability in time, especially after 2018 (seasoned sector)
- **ROE** with mixed behaviour in time. When positive, the performance is solid from a financial perspective (usually between 15% and 20% is a fine ratio)
- **Net debt to Equity** indicated high indebtedness. In the current economic context might lead to liquidity restrictions
- **Price-to-earnings ratio** is another sign of a possible Minsky red flag, especially within the diversified companies and contrasting hydro
- Most companies have indebtedness (e.g. loans) but are unrelated to liabilities rated by **credit rating agencies**
- **ESG scoring** was notably inconsistent in RE, which is extensively perceived as a sustainable industry
- **Challenges** include i) Anti-woke State Lawmaking Surges, ii) Diversity or lack of regulation, iii) macroeconomic environment, iv) Industry-related difficulties