# Creation and Evolution of New Markets: The Case of Interest Rate Benchmarks

Richard Sandor
Chairman & CEO
American Financial Exchange

Aaron Director Lecturer in Law and Economics, University of Chicago Law School

Board of Advisors
Center for Financial Stability

# History of Value Creation

- After World War II, wealth creation in the U.S. was largely driven by manufacturing.
- **The 1970s**: driven by commodities and other sectors that benefited from inflation (agricultural concerns, energy companies and storied commodity trading firms).
- **The 1980s**: Full development of the financial futures markets, interest rates futures and swaps. The commoditization of corporate debt via high-yield bonds led to further wealth creation and greater access to capital.
- **The 1990s**: Innovations in technology, personal computers, telecommunications, and software.
- **The 2000s**: The growth of the Internet ; social networks and communication media. Commoditization of data and information.
- **The 2010s:** Regional and Community Banks in the U.S.

# SEVEN STAGES OF MARKET CREATION

1. Structural change
2. Standardization
3. Evidence of ownership
4. Development of informal spot and forward markets.
5. Emergence of securities and commodities exchanges
6. Creation of organized futures markets and options
7. Proliferation of over-the-counter markets

# Examples of the Seven Stage Market Evolution Process

- Dutch East India Company (1605)
- Wheat (1848)
- Collateralized mortgage obligations (1970)
- U.S. Sulfur dioxide emissions allowances (1990)

# The MAGIC NINE

1. Price variability of the commodity;
2. a market where price is competitively determined;
3. homogeneity (or the close movement of prices of different grades of the commodity);
4. a pattern of forward contracting with significant deficiencies;
5. and the existence of a viable cash market (a market for immediate delivery) in order to facilitate delivery procedures
6. Institutional framework that minimizes transaction costs
7. Contract design
8. Education
9. Regulation

# Structural Change for Interest Rates

- 1960s – early stages of volatility in interest rates following WWII
- Birth of Libor
- 1970s:
  - Growing Deficits
  - Arab Oil Embargoes
  - Saturday Night Massacre
- 2007-2008 Great Recession

# A Chronology of LIBOR and its transition

- 1969 – birth of Libor as a way to syndicate a loan to the Shah of Iran
- 2011 – Royal Bank of Scotland fires four employees for Libor-fixing
- 2012 – Barclays is fined by the UK's FSA, CFTC and US Department of Justice;
  - UBS later also fined by several regulatory agencies.
  - FSA confirms that the BBA would no longer administer Libor.
  - Ameribor patent
- 2013 - UK government chose ICE as new the new administrator for the LIBOR. The transfer of the administration was completed on February 1, 2014

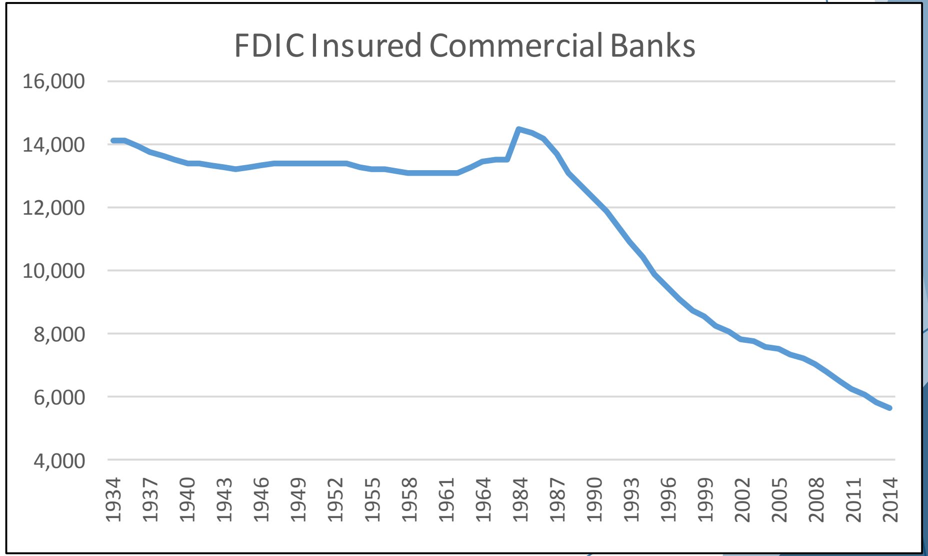
# A Chronology of LIBOR and its transition

- 2014 - U.S. Federal Reserve Board and the Federal Reserve Bank of New York announced the creation of the Alternative Rates Reference Committee (ARRC)
  - Ameribor Trademark Issued
- 2015 – the American Financial Exchange (AFX) begins trading in December
- 2016 - ARRC released its first report on possible replacements to LIBOR
- 2017 - Andrew Bailey publicly called for LIBOR to be discontinued and replaced by the end of 2021
- 2018 – SOFR starts being published on April 4;
  - first issuances linked to SOFR begin by Freddie, Fannie; World Bank; Barclays, Credit Suisse, Wells Fargo; first swap cleared by CME;
  - first commercial loan indexed to Ameribor between an Alabama bank and Tennessee auto-dealer
  - ARRC continues consultation process involving ISDA and other bodies

# Structural Changes: Banking

- Beginning in the 1980s
  - Elimination of most S&Ls in the United States
  - Emergence of asset-liability management
  - 14,483 Commercial Banks at the peak in 1984

- More recently
  - 2007-2008 Financial crisis
  - Dodd-Frank
  - Zero interest rate environment
  - 5,356 Commercial Banks in 2016




Source: FDIC

# New Paradigm

- New regulation require economies of scale in compliance
  - Competition & compliance costs will lead to consolidation in banks
- Interest rate environment
  - Low interest rate environment eliminated infrastructure for interbank market
- Technology
  - Advances of bitcoin ledger technology (recent test)
  - New lending platforms
  - Blockchain

# Opportunities in the U.S. Banking Market

- Access to capital & equity growth will foster consolidation

- Develop short to medium term assets to fill hole in supply market

- Create alternative effective sources of funding through technology advancements
  - Electronic platforms for new products: AFX, Blockchain

- Define U.S. interest rates in a new and homogenous way

# Multiplicity of Indexes in Commodities, Energy and Equity Markets

No historical precedence in other types of financial products for a market that depends on only one reference rate.

Commodities: hard winter; hard spring; spring wheat and soft red;

Energy: West Texas Intermediate, Brent, Mideast sour; Shanghai crude;

Equities, more stock indexes than there are stocks.

# Choices

- Minimize systemic risks
- Emergence of different benchmarks that can serve different segments of the marketplace.
- There is plenty of room for SOFR, Ameribor and other rates, including a modified Libor

# Appendix: Rate Calculation

LIBOR: now based on submissions from panel banks that are determined through the use of a standardized, transaction data-driven methodology

SOFR: calculated as a volume-weighted median of transaction-level tri-party repo data. Each business day, the New York Fed publishes the SOFR at approximately 8:00 a.m.

Ameribor: Weighted average rate based on daily trading volume; Calculated at close of trading from trades done on a transparent market with surveillance and compliance done by Cboe. Now published as AMBOR.

# AFX Average Daily Outstanding Volume and Number of Participants Quarterly
# Total All Products