

Introduction

state of finance

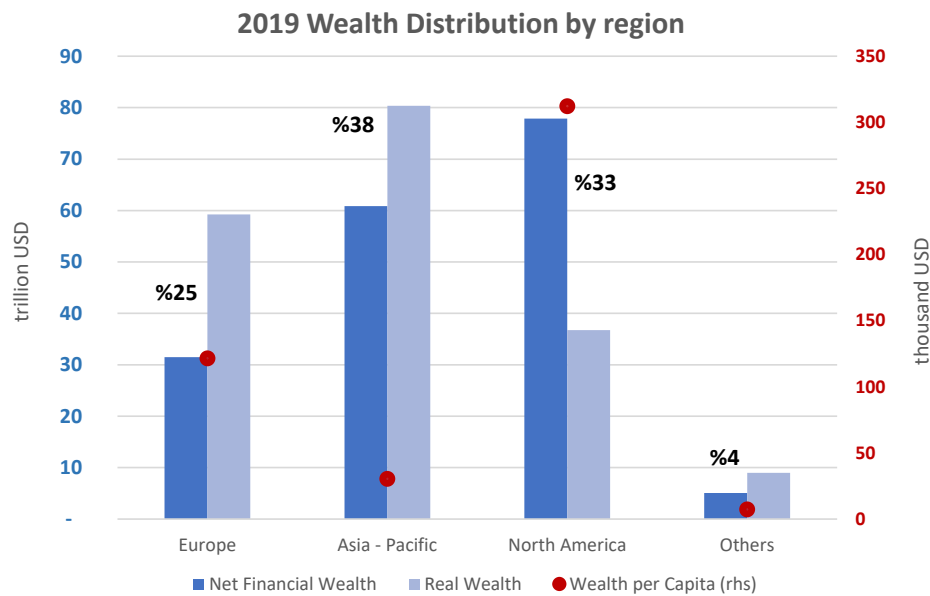
Vedat Akgiray
Boğaziçi Üniversitesi
İstanbul

Bad capitalism crowding out free markets

Capitalism has increased economic welfare since 1980's ... but with problems:

- ▶ Environmental damage
- ▶ Increasing wealth and income inequality
- ▶ Loss of trust in institutional fairness and justice
- ▶ Extreme 'financialization'
 - ▶ Crises have become "ordinary events"
- ▶ Covid-19 caught the world order off-guard
- ▶ ... and now Ukrainian – Russian war

Global distribution of wealth

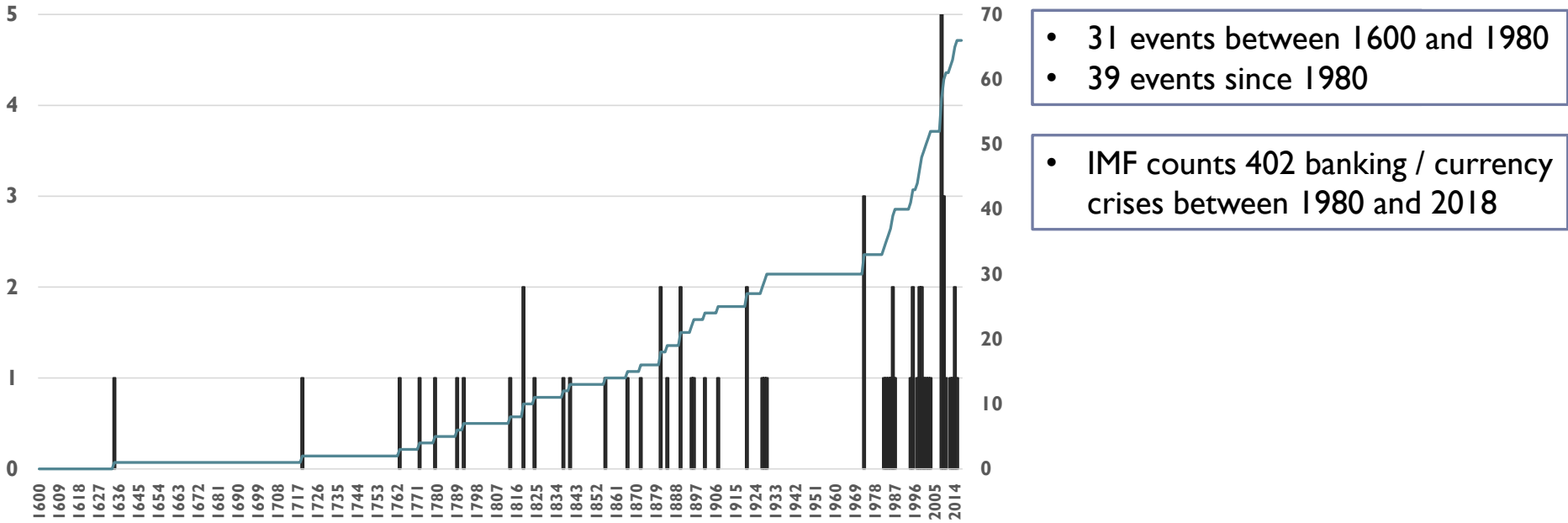


- Richest 10% own 82%
- Richest 1% own 45%
- Wealth of richest 26 persons > Wealth of poorer 3.8 billion people

This will be worse after Covid

Source: Credit Suisse, Forbes, OECD

More and deeper financial crises




Source: Deutsche Bank, IMF

More and deeper financial crises

➤ **2008 - Worst crisis in known financial history ?**

	<u>1929 Great Depression</u>	<u>2008 Financial Crisis</u>	<u>After 2021?</u>
Stock markets	- 43%	- 58%	?
Home prices	- 6%	- 18%	?
Household wealth	- 6%	- 15%	?

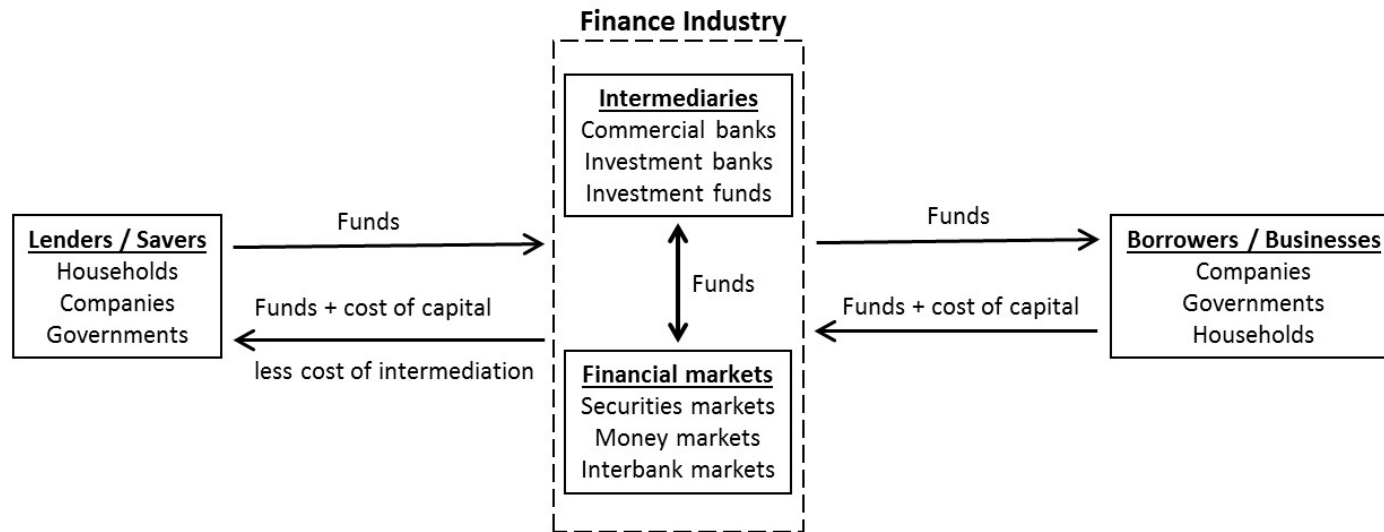


➤ **Trust in governments' handling of finance is at a historical low**

- **Rising populism**
- **Diminishing power of central banks**
- **A few technology firms shaping our lives**
- **DeFi, Bitcoin, Libra**

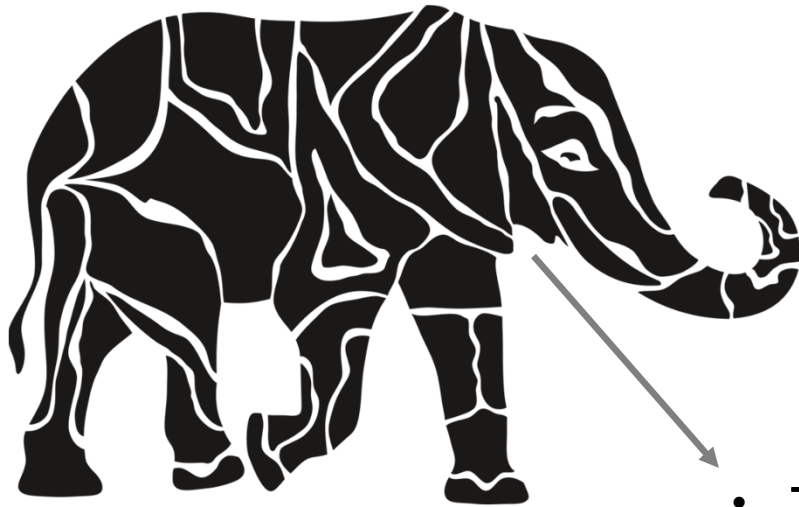
Warren Buffett's answer
last summer

Finance is intermediation and *simple* (?)

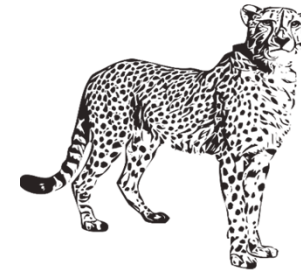


...but it has grown to a size and complexity beyond that

State of finance

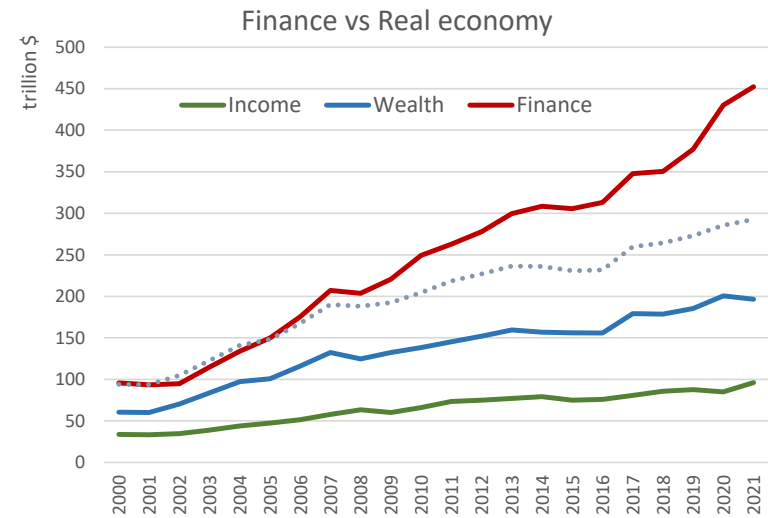
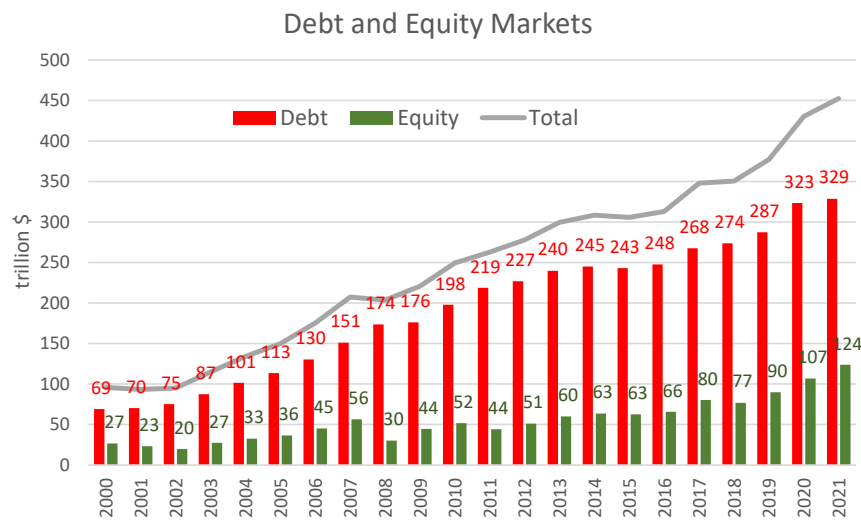


way to go



- Too much finance
- Too much debt and too little equity
- Expensive and complex
- Concentrated ownership and control
- Outdated economic and financial models

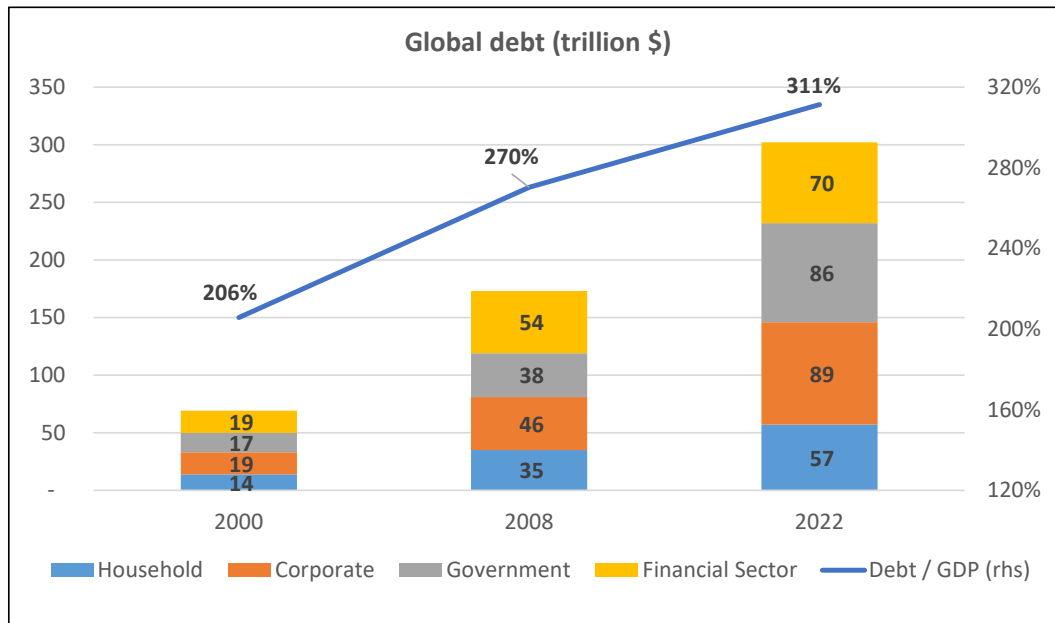
Too much finance



- *Financial openness / trade openness > 10 ... then where is all the money?*
- *Origins and trading of financial assets are often disconnected from real economic activity*

Sources: IMF GDD, IIF, WFE, Credit Suisse

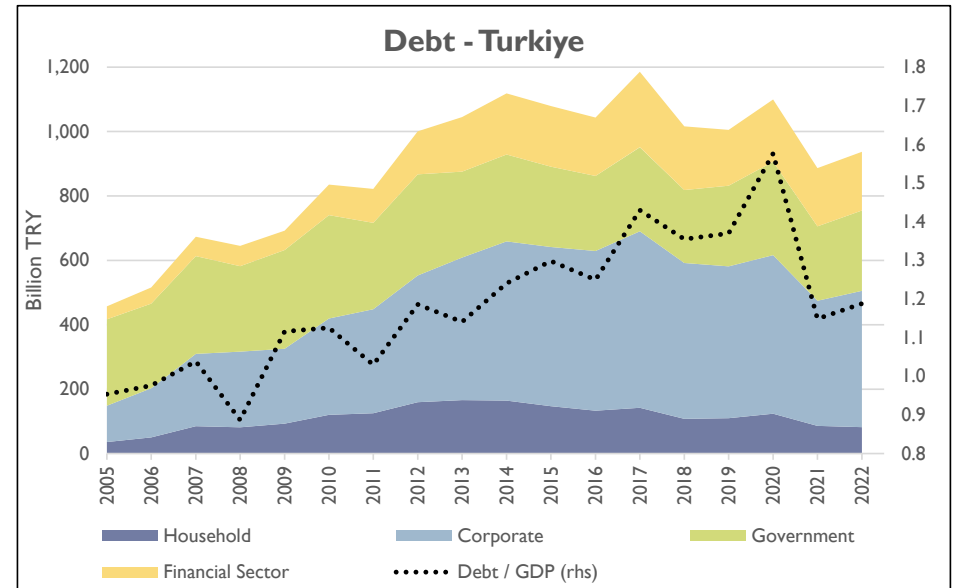
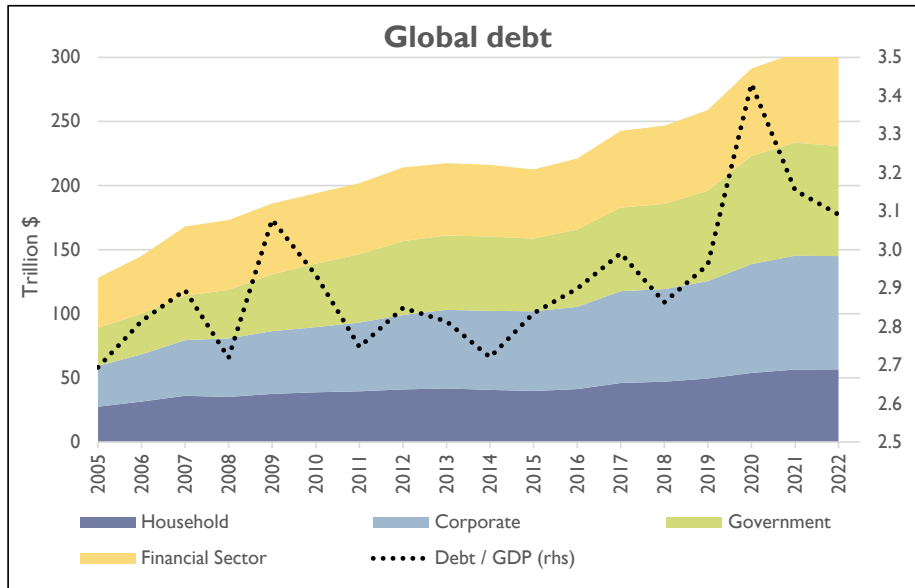
Too much debt



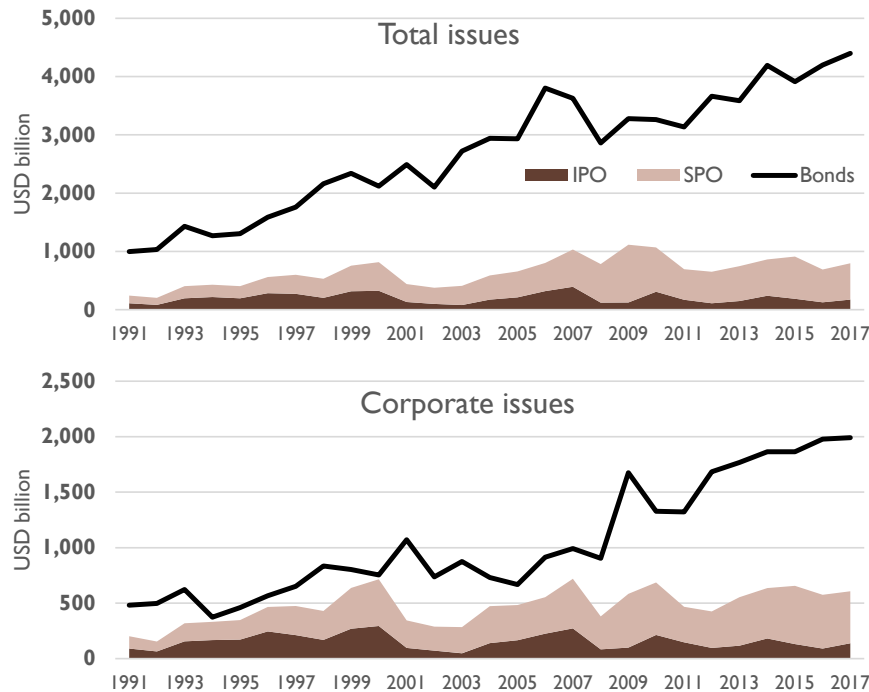
- *There is too much debt and too little equity in corporate, household and public finances.*
- *Too much debt is a call for defaults, crises, and subsequent social trauma.*

Sources: IMF GDD, IIF, BIS

Too much debt

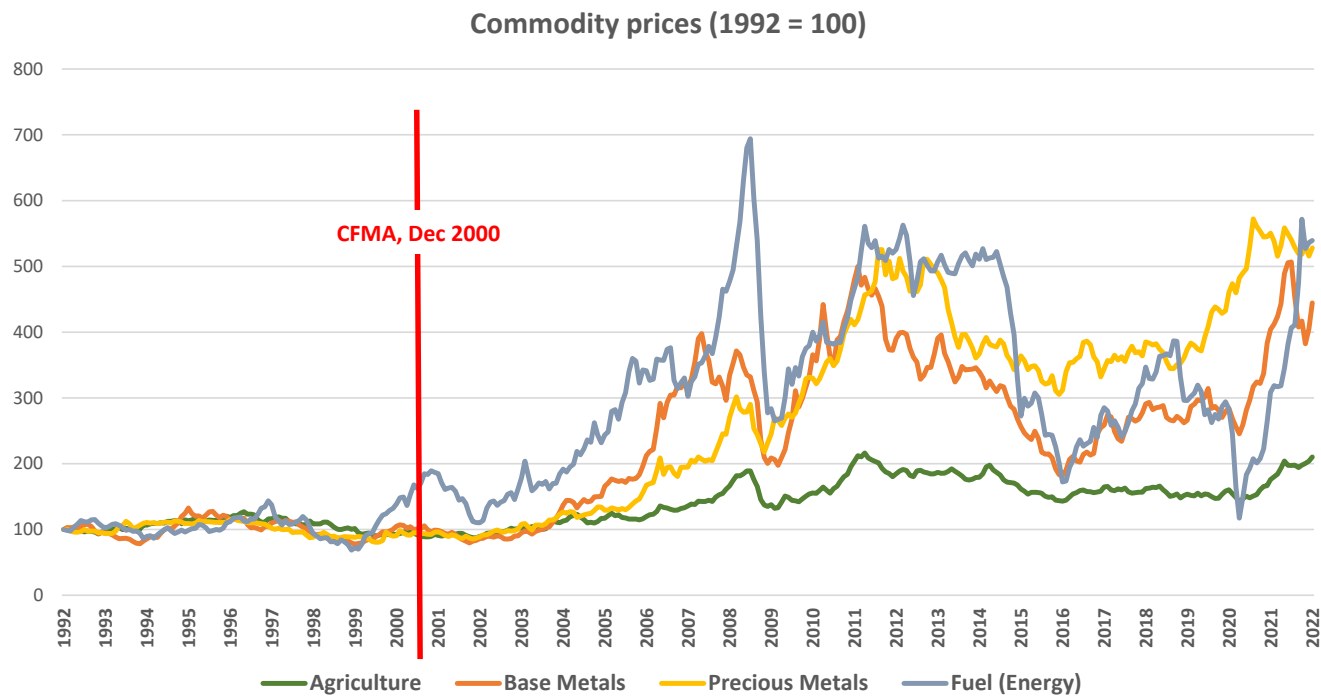


... and little equity



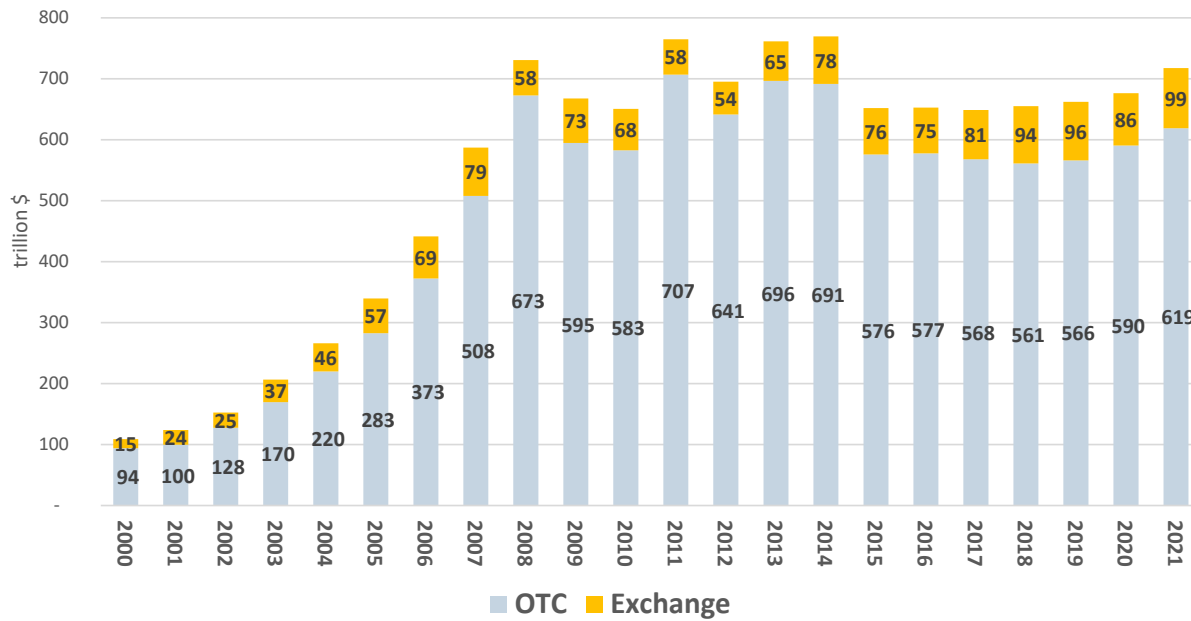
- *Who will support entrepreneurial courage?*
- *How will income be shared fairly?*
- *Lessons from the crises???*

World of volatility



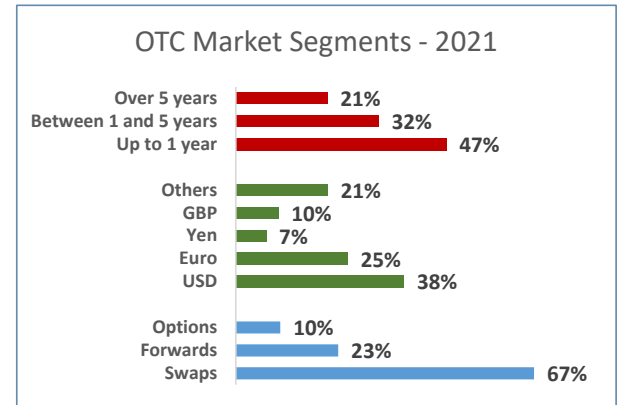
- *Change cannot be explained by economics*
- *Think of the poor vs the rich*

Derivatives (Notional Value)

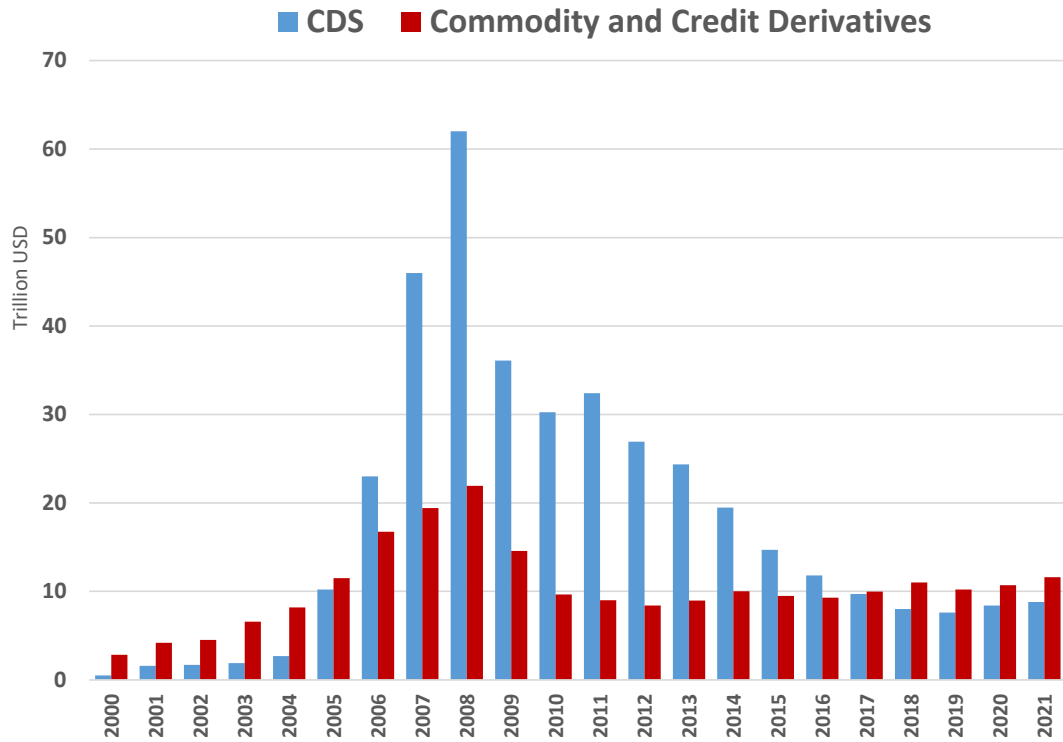


Exchange traded (2019, %)

Futures	35	\$	71
Options	64	€	14
Others	1	£	9
		Other	6



OTC 86%
Exchange 14%



Percentages (2019)

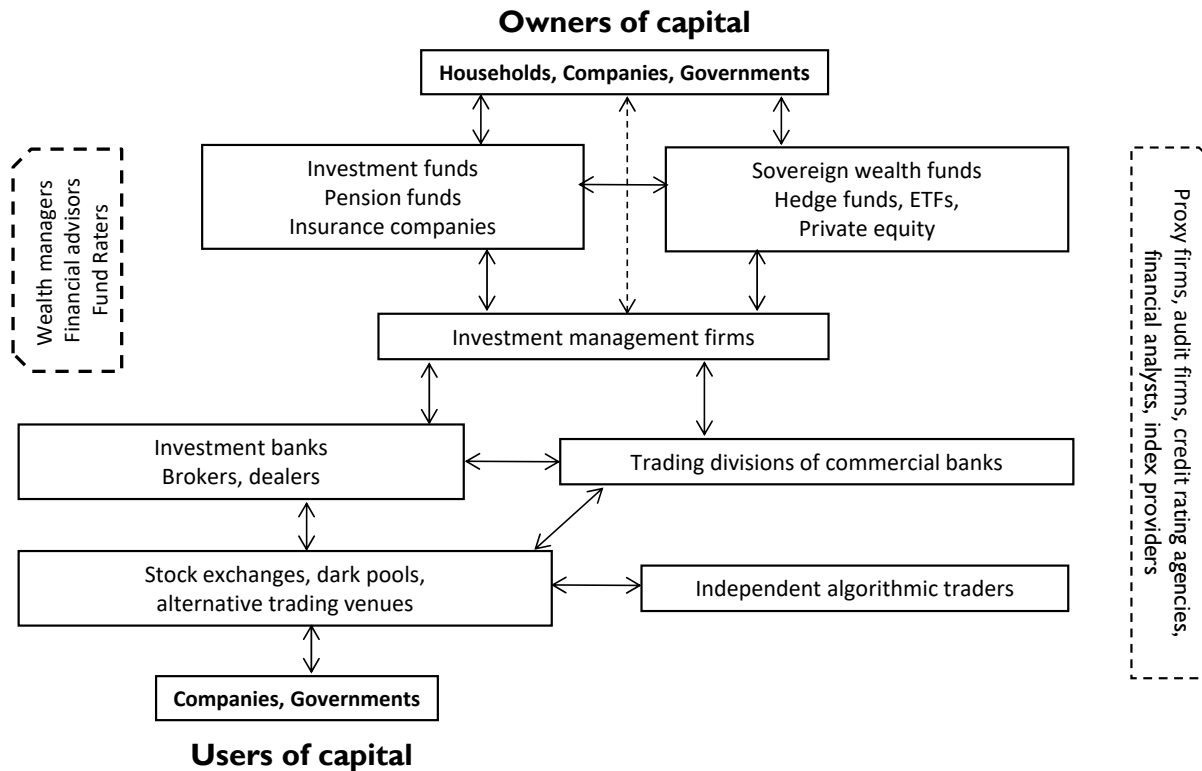
commodities

Precious metals	44
Others	56

CDS's

Sovereigns	16
Financial firms	20
Non-financial firms	28
Others	36

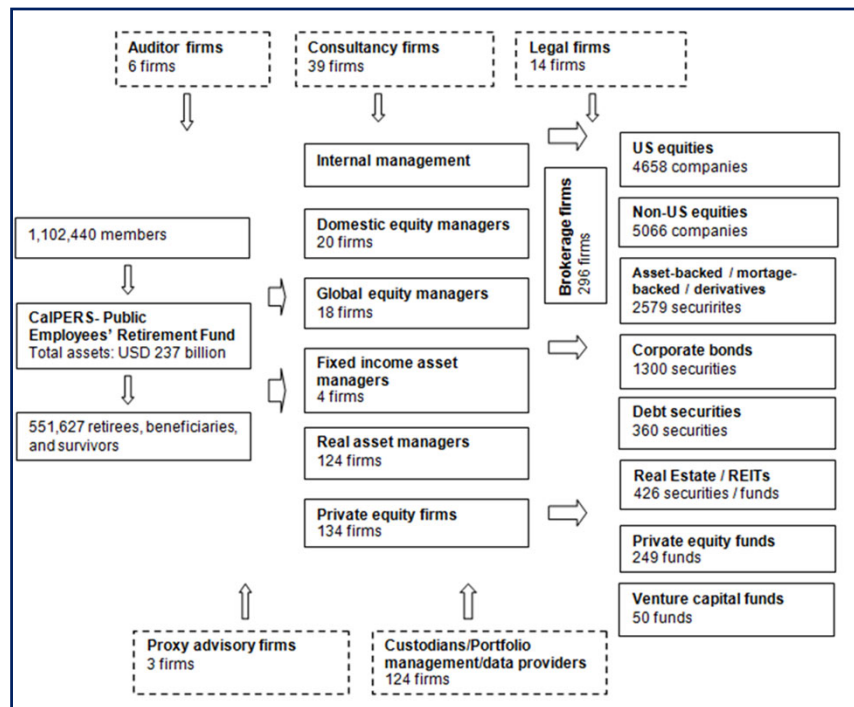
World of complexity



- *Too complex and opaque*
 - *hindering good corporate governance and effective supervision.*
- *85% of control and ownership*
 - *Richest 10%*
 - *3 asset managers*
 - *3 CRA's*
 - *4 audit firms*
 - *Power of governments?*
- **How about SME's?**

World of complexity

CalPERS (2012)



Norwegian SWF (2018)

- ▶ AUM > \$1 trillion
- ▶ 70% in equities (1.4% of global equity value)
- ▶ More than 9,000 companies in 72 different countries
- ▶ More than 10,000 AGM's / year

Concentrated ownership and control

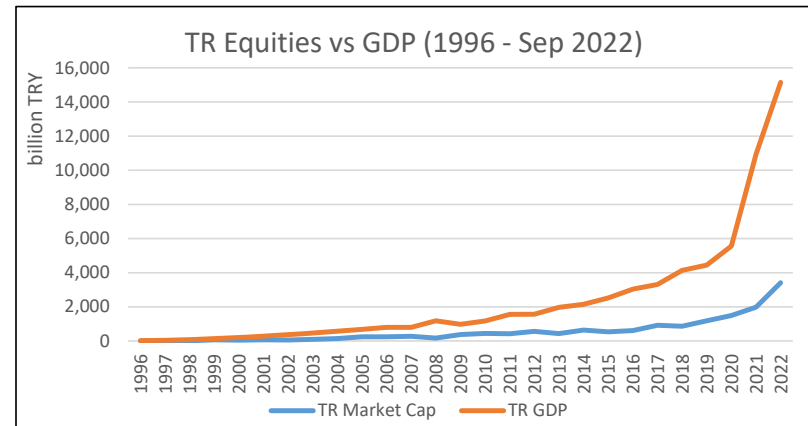
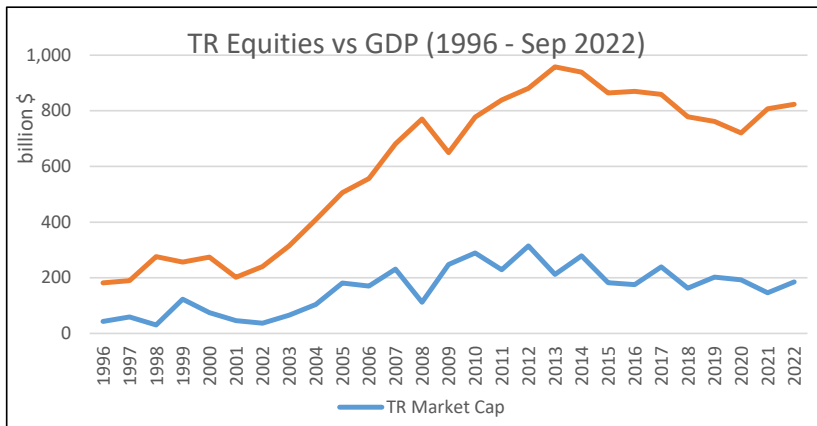
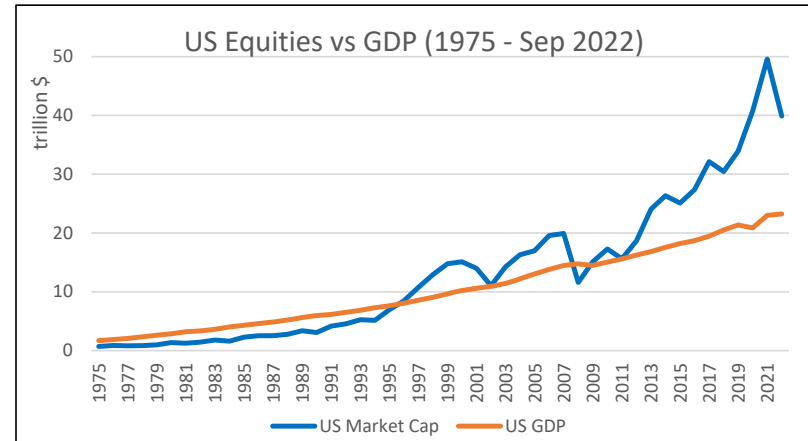
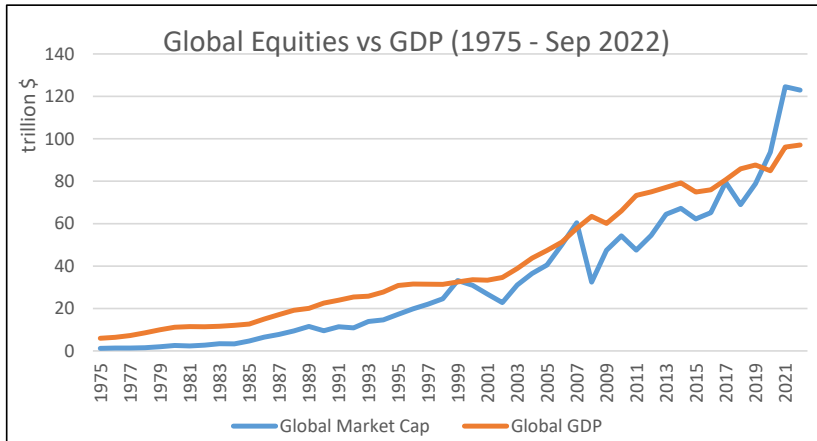
- ▶ Size of investment funds has increased to about \$150 trillion (bigger than banks)
 - ▶ They control about 40% of global equities
- ▶ Top 3 shareholders have majority control in half of the world's largest corporations
- ▶ Algorithmic, derivatives-based and passive trading make up more than 90% and 70% of total trading volumes in US and Europe, respectively.
- ▶ Vanguard, BlackRock and State Street (the new «Big Three») attract about 80% of the capital allocated to investment funds
 - ▶ Individually controlling more than 5% of most of S&P 500 companies' equity
 - ▶ Collectively controlling about 20% of S&P 500 companies
- ▶ S&P, Moody's and Fitch collectively have a 95% share in global ratings market
- ▶ PWC, EY, KPMG and Deloitte audit 98% of S&P500 and FTSE350 companies
- ▶ New oligopolies of private stock exchanges
- ▶ ... all further threatening competition, wealth distribution and corporate governance

World of disruptions and ambiguity

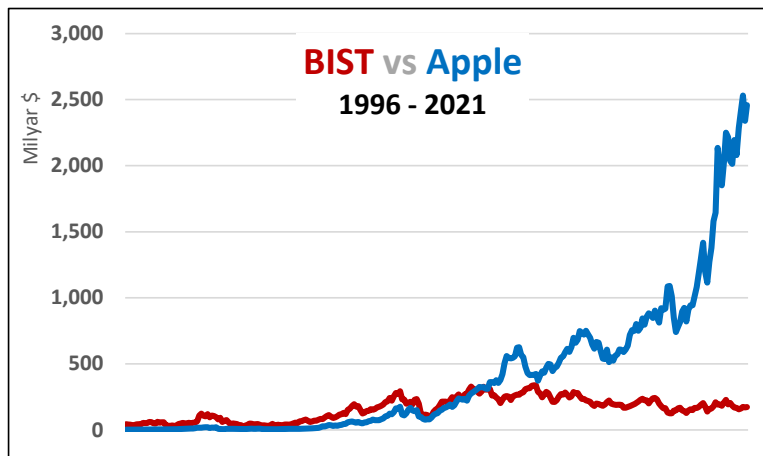
- ▶ Computers are the new market-makers – who will determine value?
- ▶ New technologies such as blockchains and digital currencies
 - ▶ New business models and global value chains
 - ▶ Boards are too old to adapt
- ▶ Chaotic global political order after 2008
 - ▶ New sources of risk and uncertainty
 - ▶ Loss of trust in financial industry and governments' fairness
 - ▶ Finance has become an end in itself
 - ▶ Academia and policy makers resist to update their mindsets and tools.
 - ▶ Policy makers and regulators seem to have forgotten 2008
 - Bubble in equity markets
 - Bubble in fixed income... **New!**

What will happen?

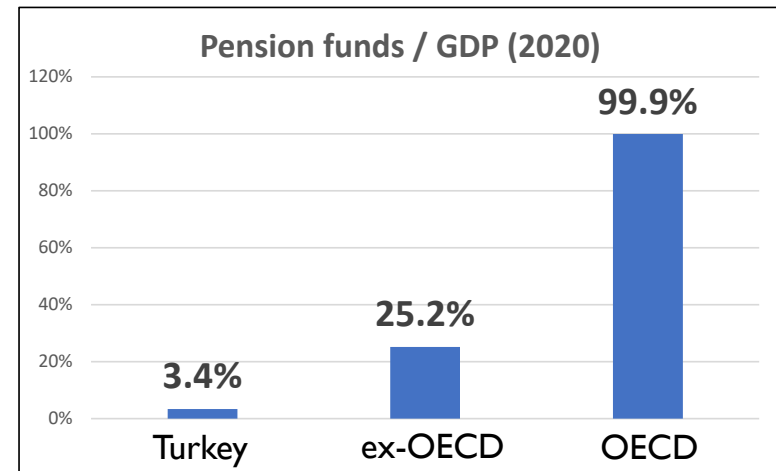
Are we in a stock market bubble?



Two words on Turkish capital markets



	(billion \$, 23/11/21)
Apple	2,640
Google	1,930
NYSE	36,140
NASDAQ	26,980
Zoom	78
Aselsan	3.7
Tcell + Ttelekom	5.8
BIST	162



- ▶ Small equity markets
- ▶ Small funds market
- ▶ Full dependence on bank credit
- ▶ Start-up enthusiasim

Two words on Turkish capital markets

Equity markets

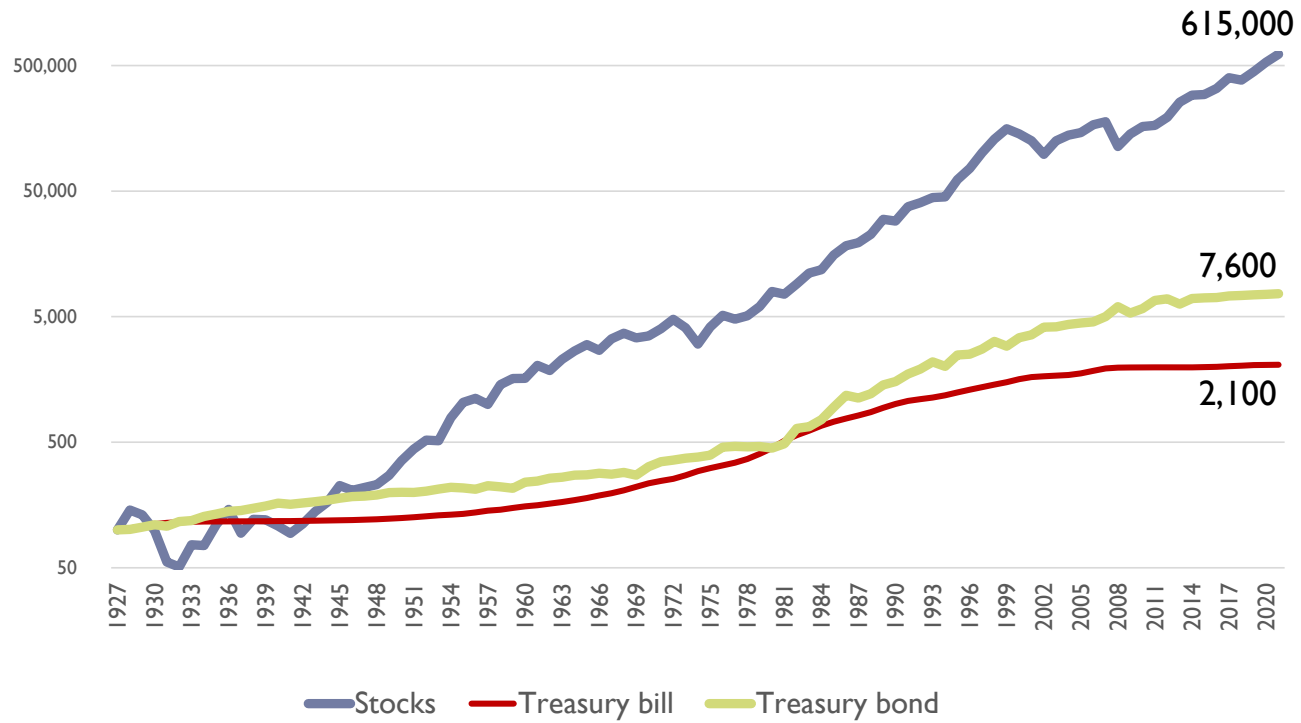
- ▶ BIST market cap (billion \$)
185 = 23% of GDP
- ▶ World market cap
122,000 = 125% of GDP

Debt markets (June 2022)

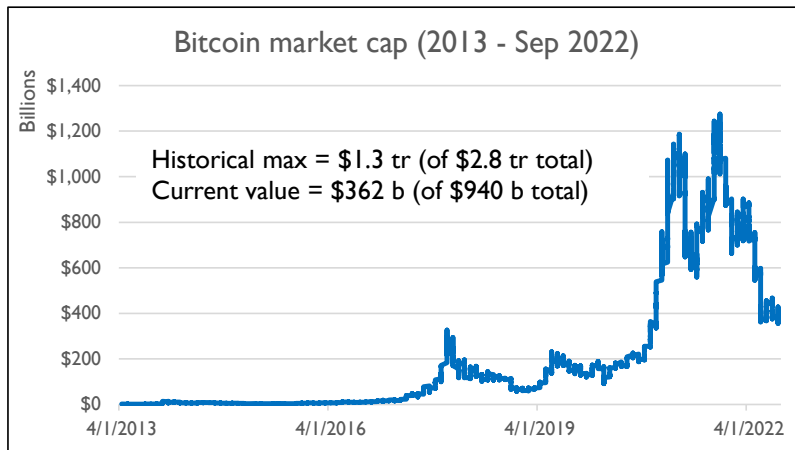
- ▶ Total debt (billion \$): 940 = 120% of GDP
 - ▶ Household: 82
 - ▶ Corporate: 424
 - ▶ Government: 249
 - ▶ Financial: 182
- ▶ World: 303,000 = 310% of GDP

	World	Türkiye
Debt / Equity	3 x	6 x

Long-Term Performance (1927-2021)



...and now...



	Market Cap (Sep 2022)	Share
Bitcoin	\$361,845,802,144	38.5%
Ethereum	\$159,761,052,314	17.0%
Tether	\$67,958,943,060	7.2%
USDC	\$49,601,339,796	5.3%
BNP	\$44,291,533,699	4.7%
XRP	\$24,380,642,813	2.6%
Binance USD	\$20,527,871,925	2.2%
Cardano	\$15,476,868,893	1.6%
Solana	\$11,674,886,056	1.2%
Dogecoin	\$8,196,820,072	0.9%
Polkadot	\$6,985,530,347	0.7%
DAI	\$6,923,174,043	0.7%
Polygon	\$6,552,593,481	0.7%
Shiba Inu	\$6,152,085,801	0.7%
TRON	\$5,518,840,468	0.6%
Avalance	\$5,171,557,897	0.6%
WBTC	\$4,620,508,871	0.5%
Uniswap	\$4,390,243,253	0.5%
LEO	\$4,088,673,590	0.4%
Cosmos	\$3,972,283,497	0.4%
Remaining 9,442	\$125,908,747,980	13.4%

Concept of risk

▶ **Known risks**

- ▶ Encountered by most or all people
- ▶ Extent and implications can be modelled
- ▶ Can be part of business plans
- ▶ Written in your textbooks

▶ **Unknown risks**

- ▶ Encountered by some people, or well described in historical records
- ▶ Extent and implications are unclear

.. climate change, natural disasters, geopolitics, technological disruptions, wars ...

▶ **Unknowable risks**

- ▶ **Not seen in known history**

... comet striking the earth, **Covid-19 ...**

Known risks and their management – revised pages in notes

▶ Market risk

Risk due to changing market prices and quantities

▶ Credit risk

Risk due to default in debt payments

▶ Liquidity risk

Risk of loss in value when trying to buy or sell

▶ Operational risk

Mismanagement, fraud, legal mishaps, operational errors

▶ Funding risk (new!)

Inability to find enough cash to prevent insolvency

▶ Diversification

- ▶ Diversification of balance sheets and portfolios
- ▶ To reduce market risk

▶ Hedging

- ▶ Buying insurance, or hedging to reduce risk
- ▶ To reduce credit and liquidity risk

▶ Prudence (new!)

- ▶ Integrity and ‘ak akçe kara gün içindir’
- ▶ To reduce operational risk and to prepare for unknown risks

What must be done?

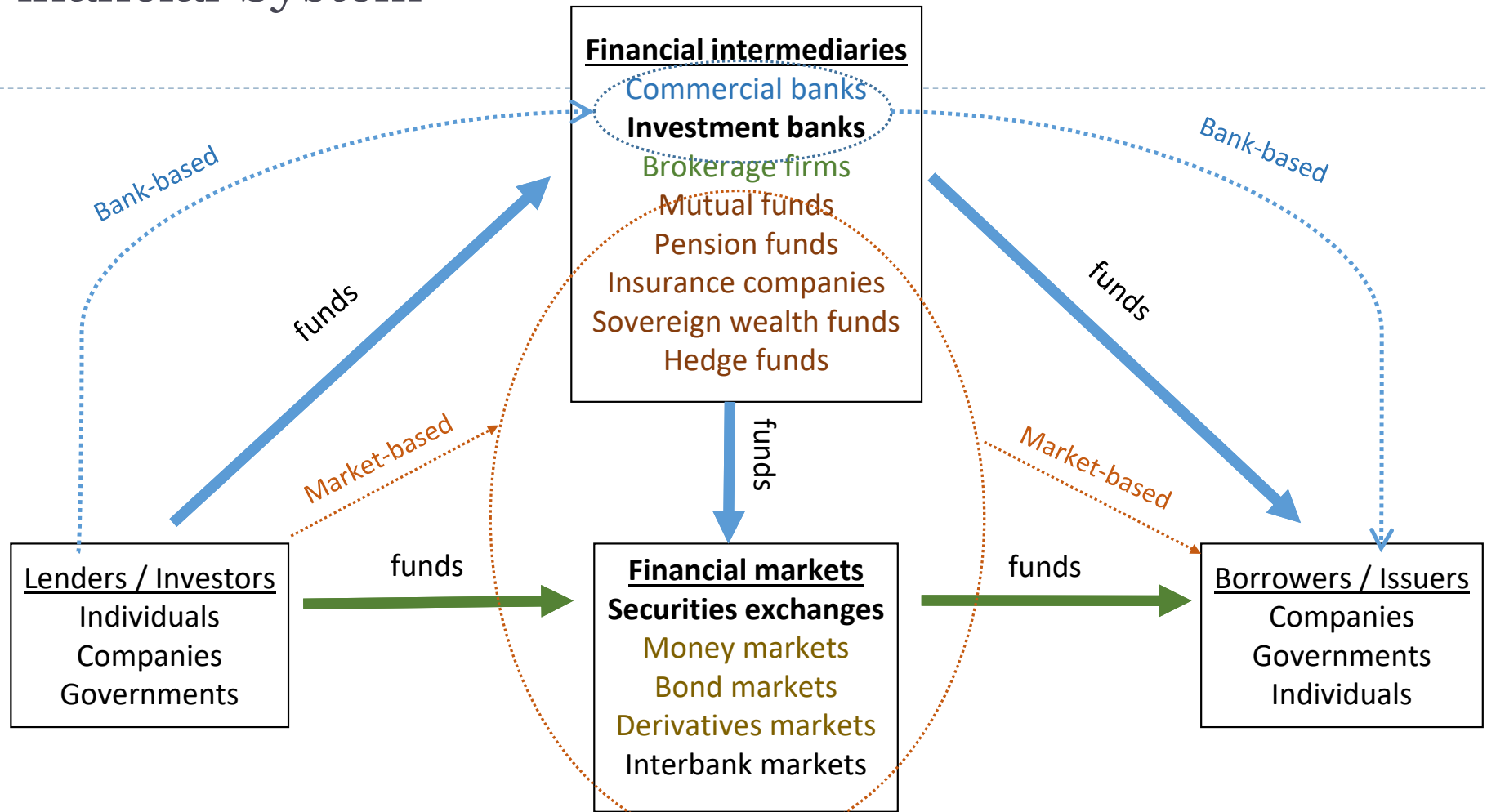
- Dark side of debt
- Function-based regulation
- Central banking
- New technologies
- Financial literacy



Topics in finance

- ▶ Financial system
- ▶ Markets, institutions and instruments
- ▶ Valuation and trading of financial securities
 - ▶ Bonds, common stocks, derivatives
 - ▶ Risk and its management
- ▶ New technologies and digitalization
- ▶ Investor psychology and behaviour

Financial System



Commercial banking

Assets

Cash and money market funds

Reserves at the central bank

Lendings

Overdraft limits

Consumer loans and credit cards

Mortgage credit

Banker's acceptances (lines of credit)

Term loans

Standby and revolving credits

Project finance

Other securities

Liabilities

Deposits

Demand deposits

Time deposits

Payments

Borrowings

Other banks

Public markets

Equity capital

Paid-in capital

Accumulated profits

Investment banking

Core Business

- ▶ Arranges financings and underwrites issues for corporation and governments
 - ▶ Debt, equity, convertibles
 - ▶ Primary market and secondary market offerings
- ▶ Advises on M&A transactions
 - ▶ Buy-side and sell-side

Trading Business

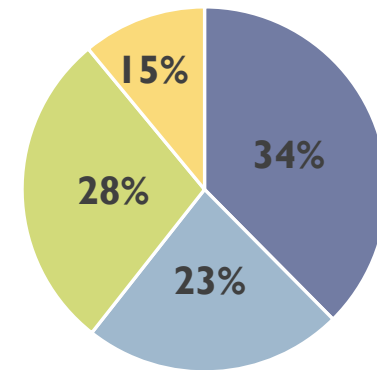
- ▶ Client Trading
 - ▶ Sells and trades securities as an intermediary on behalf of clients
 - ▶ Research is provided to investing clients
- ▶ ~~Proprietary Trading and Principal Investing~~
 - ▶ Trading and investment activity ~~by the firm on its own behalf~~
 - ▶ Trading in ~~primary securities and derivatives in a manner similar to hedge funds and private equity funds~~

Asset Management Business

- ▶ Offers financial products and services to clients
- ▶ Co-invests with clients in hedge fund and private equity funds

World's Largest Banks (Dec 2021)

Rank by total assets			(US\$ billion)	Market cap
1	ICBC	China	5,536	245
2	China Construction Bank	China	4,762	175
3	Agricultural Bank of China	China	4,575	158
4	Bank of China	China	4,206	
5	JPMorgan Chase	US	3,743	468
6	Mitsubishi UFJ Financial	Japan	3,176	
7	Bank of America	US	3,169	359
8	HSBC Holdings	UK	2,953	122
9	BNP Paribas	France	2,905	
10	Credit Agricole	France	2,674	
11	Citigroup	US	2,291	120
12	Sumitomo Mitsui Financial Group	Japan	2,176	
13	Japan Post Bank	France	1,998	
14	Postal Savings Bank Of China (PSBC)	China	1,981	
15	Mizuho Financial Group	Japan	1,957	
16	Wells Fargo	US	1,948	191
17	Santander	Spain	1,914	
18	Barclays	UK	1,874	
19	Bank of Communications	China	1,836	
20	Group BPCE	France	1,724	

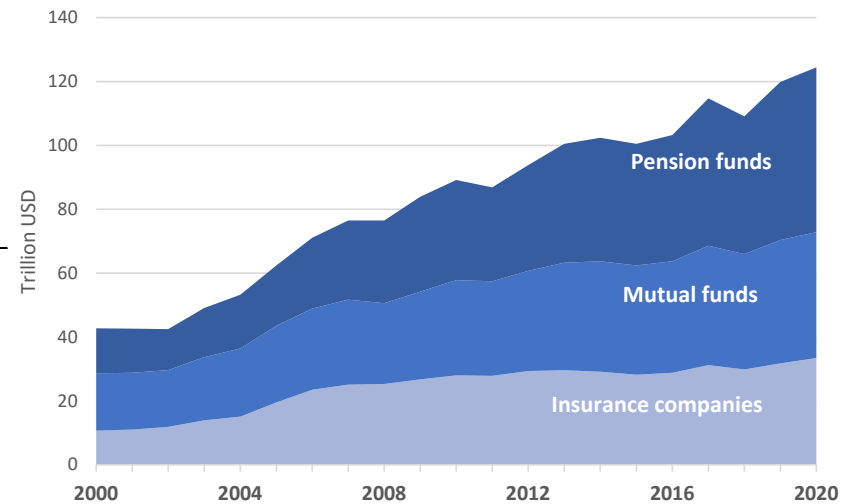


■ China ■ US + Canada ■ Europe + UK ■ Japan

Note: US banks use US GAAP, Japanese banks use Japanese GAAP, others use IFRS for accounting.

Intermediaries

- ▶ Banks (120t gross)
- ▶ Institutional investors (155t)
 - ▶ Money market funds (7t)
 - ▶ Investment funds (mutual funds)
 - ▶ Pension funds
 - ▶ Defined benefit
 - ▶ Defined contribution
 - ▶ Insurance companies
 - ▶ Sovereign wealth funds (8.5t)
 - ▶ Hedge funds (3.5t)
 - ▶ Exchange-traded funds (ETF, 14t)
 - ▶ Cryptocurrencies (1.5t)



- ▶ New technology platforms

Markets

- Maturity of instruments
 - Money markets
 - Capital markets
- Initiator of trade
 - Primary markets (e.g. IPO's)
 - Secondary markets
- Place of trade
 - Organized exchanges
 - Over-the-counter (OTC) markets
 - Dark pools

More than 70% of trade is algorithmic and HFT

BIST



NYSE



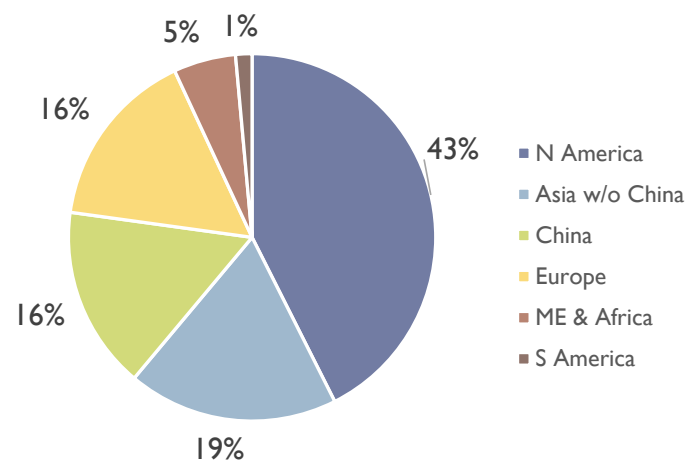
where all are done



World's Largest Stock Exchanges (July 2022)

Rank	Name	Economy	Location	Market Cap	# Listed Co's
1	NYSE	USA	New York	24.68	2,127
2	Nasdaq - US	USA	New York	19.53	3,141
3	Shanghai Stock Exchange	China	Shanghai	7.05	1,618
4	Euronext	ND,BL,PR,France	Amsterdam	5.91	1,460
5	Japan Exchange Group	Japan	Tokyo	5.31	3,715
6	Shenzhen Stock Exchange	China	Shenzhen	5.15	2,232
7	Hong Kong Exchanges and Clearing	Hong Kong	Hong Kong	4.57	2,477
8	National Stock Exchange of India	India	Mumbai	3.32	1,948
9	LSE Group	UK, Italy	London	3.17	2,370
10	Saudi Stock Exchange (Tadawul)	Saudi Arabia	Riyadh	3.15	204
11	TMX Group	Canada	Toronto	2.97	3,384
12	Nasdaq Nordic and Baltics	Sweden, Armenia	Stockholm	1.89	1,081
13	SIX Swiss Exchange	Switzerland	Zurich	1.87	253
14	Deutsche Boerse AG	Germany	Frankfurt	1.79	505
15	Korea Exchange	South Korea	Seoul	1.74	2,288
16	Taiwan Stock Exchange	Taiwan	Taipei	1.56	957
17	Tehran Stock Exchange	Iran	Tehran	1.22	335
18	ASX Australian Securities Exchange	Australia	Sydney	1.17	2,056
19	Johannesburg Stock Exchange	South Africa	Johannesburg	1.08	342
20	B3 Bolsa Balcao	Brasil	Sau Paulo	0.85	345
36	Borsa Istanbul	Turkey	Istanbul	0.18	507

Global market cap = 124 trillion USD (Sep 2022)



Instruments

- **Fixed-income securities**
 - Short-term debt instruments
 - Bank deposits and banker's acceptances
 - Commercial paper, federal funds, repo
 - Treasury bills
 - Government and government agency bonds
 - Corporate bonds
 - Unsecured bonds (e.g. debentures)
 - Secured bonds (e.g. asset-backed securities)
 - Convertible bonds, callable bonds, etc.
- **Equity securities**
 - Common stock
 - Preferred stock
- **Derivative securities** (contingent claims)
 - Forward and futures contracts
 - Swaps
 - Options
- **Precious metals and securitized real assets**
- **Foreign currencies and cryptocurrencies**

Some terms to know

- **Buy/Sell orders**
 - Market order
 - Limit order
- **Short vs long position**
- **Cash trading vs margin trading**



Tools of trade

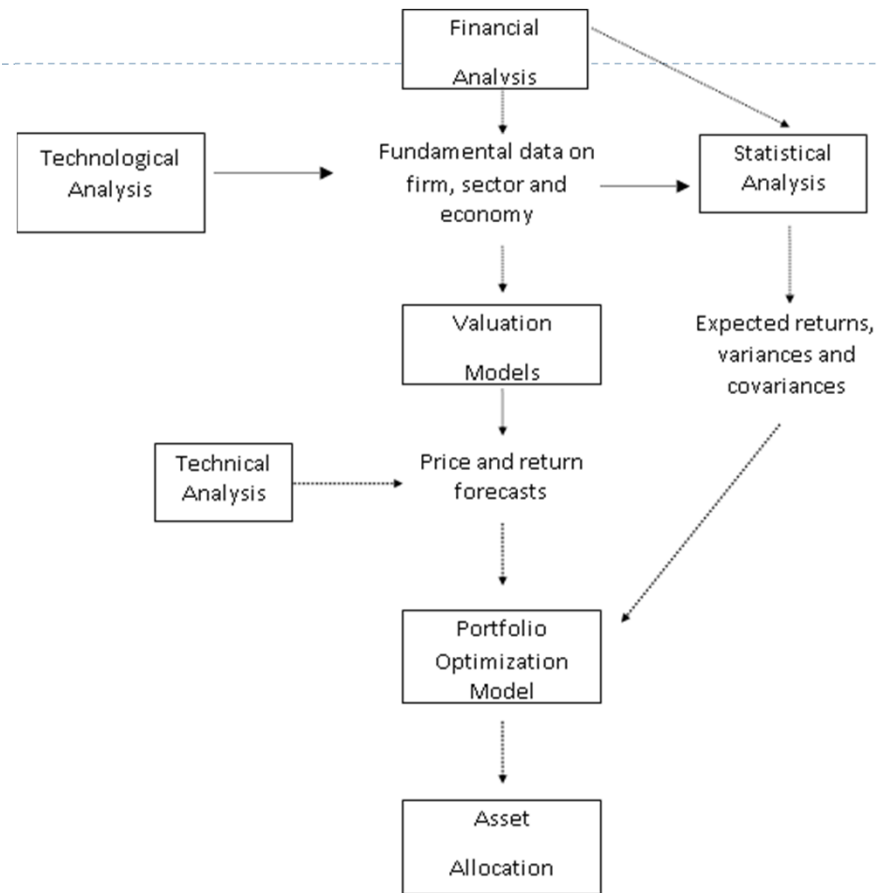
- **Diversification:** spreading of risk by putting assets in several categories and portfolios of securities
- **Hedging:** offsetting investment risk
- **Immunitization:** making a portfolio insensitive to certain events
- **Speculation:** assumption of risk in anticipation of gain but recognizing a higher probability of loss
- **Arbitrage:** profiting from differences in price and/or risk

Objectives →

- Growth
- Income
- Tax minimization (deferral)
- Inflation hedge
- Safety of principal
- Liquidity
- Control of companies

Investment styles

- Active management
 - Technical Analysis
 - Fundamental Analysis
- Passive management
 - Markets are efficient
- “Technological Analysis”



Big finance today



Problems → opportunities

- ▶ **Too big and too complex**
 - ▶ High costs of financial services and no economies of scale
 - ▶ 8% of US GDP, 4-5% of OECD GDP
 - Example: cost of cross-border payments add up to almost 1% of global GDP
 - Cost of remittances is 5-7%, cost of credit card payments is about 3%
- ▶ **Centralized and concentrated control**
 - ▶ More than half of total deposits US and UK are in 5 banks
 - ▶ Cost of credit >> rate on deposits, largely monopolized by a few banks
- ▶ **Limited access to finance**
 - ▶ Around 2 billion people are unbanked; small start-ups cannot easily find capital
- ▶ **Lack of transparency and interoperability**

New players

Big Tech



Payments



Credit



Start-ups

Insurance and retirement



Capital markets



Wealth management



1
2