



Tehran Stock Exchange

Index Basket Derivatives



Mehran Mohamadi
Tehran Stock Exchange
Mehran.Mohamadi@Tse.ir



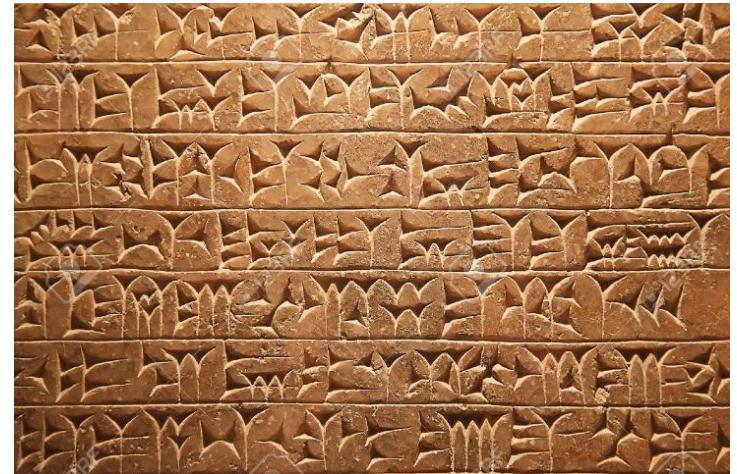
Definition of Derivative contract: A Promise





History of Derivatives

Scientist: Van de Microop (2005)



seller: Akshak-shemi

Buyer: Damqanum

Underlying asset: wood

Date: 19th century B.C.

First use of “derivative”: 1982 , New York Federal Court



INDEX FUTURES

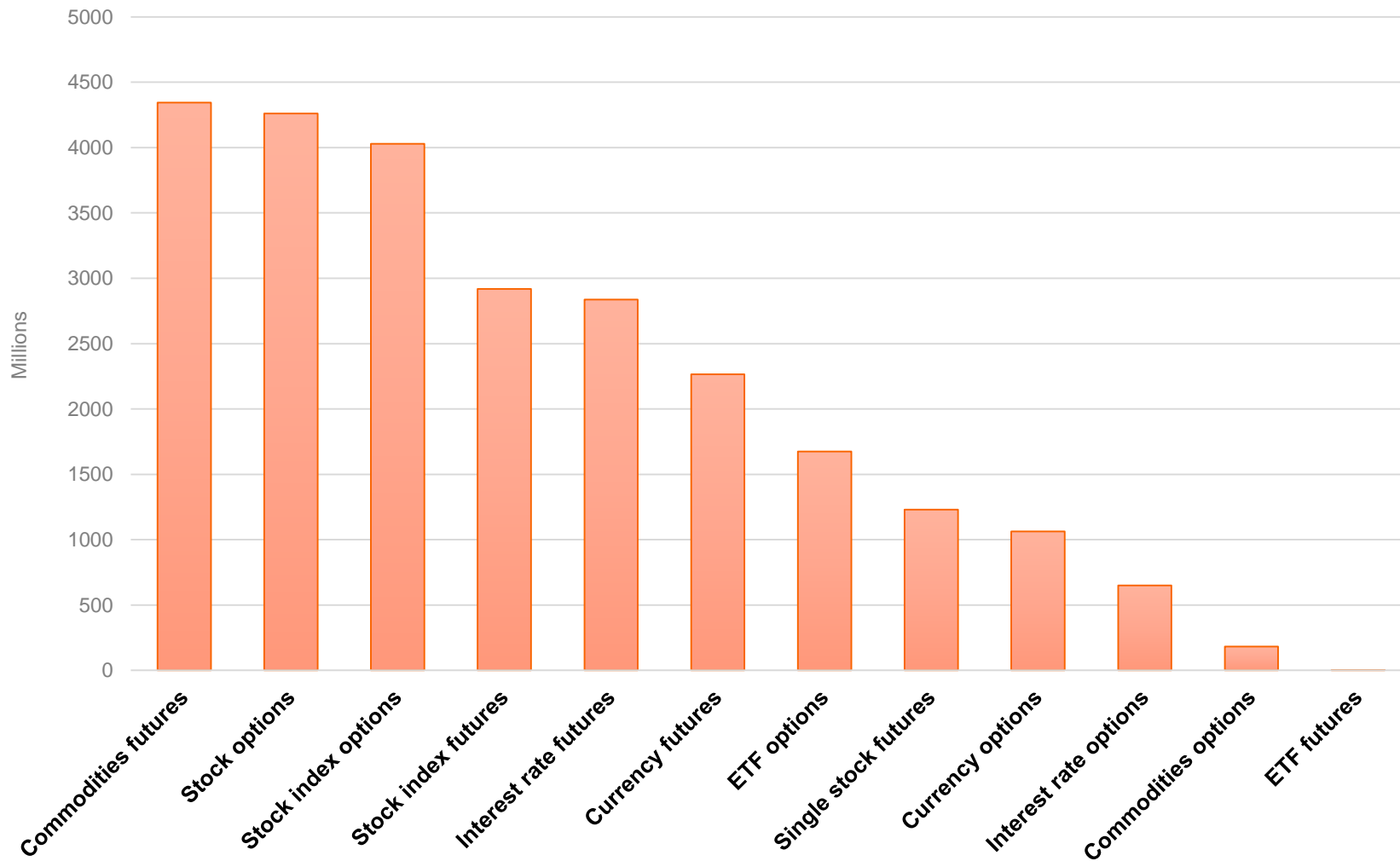


INDEX OPTION





Trading volume of derivatives (2018)



Source: World Federation of Exchanges' website



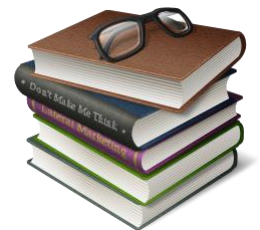
Top equity derivative contracts

	CONTRACT
1	CNX Nifty Options, NSE
2	SPDR S&P 500 ETF Options
3	Kospi 200 Options, Korea Exchange
4	E-mini S&P 500 Futures, CME
5	Euro Stoxx 50 Futures, Eurex
6	Euro Stoxx 50 Options, Eurex
7	CSI 300 Futures, China Financial Futures Exchange
8	Nikkei 225 Mini Futures, Japan Exchange
9	S&P 500 Options, CBOE
10	Taiaex Options, Taiwan Futures Exchange
11	RTS Futures, Moscow Exchange
12	S&P Sensex Options, BSE
13	CBOE Volatility (VIX) Options, CBOE
14	iShares Russell 2000 ETF Options
15	CNX Nifty Futures, NSE
16	Bank Nifty Options, NSE
17	Power shares QQQ ETF Options
18	FTSE China A50 Futures, Singapore Exchange
19	Bovespa Mini Futures, Bolsade Mercadorias & Futuros
20	iShares MSCIE merging Markets ETF Options



Index derivatives functionalities

- Hedging
- Arbitrage
- Taking short position on index
- Diversification, only by taking one position
- Hard to manipulate
- Positive impacts on the relevant spot market
 - Decrease in volatility of index
 - Systematic risk mitigation
 - Increase in market liquidity





Sharia dimensions of trading Index derivatives

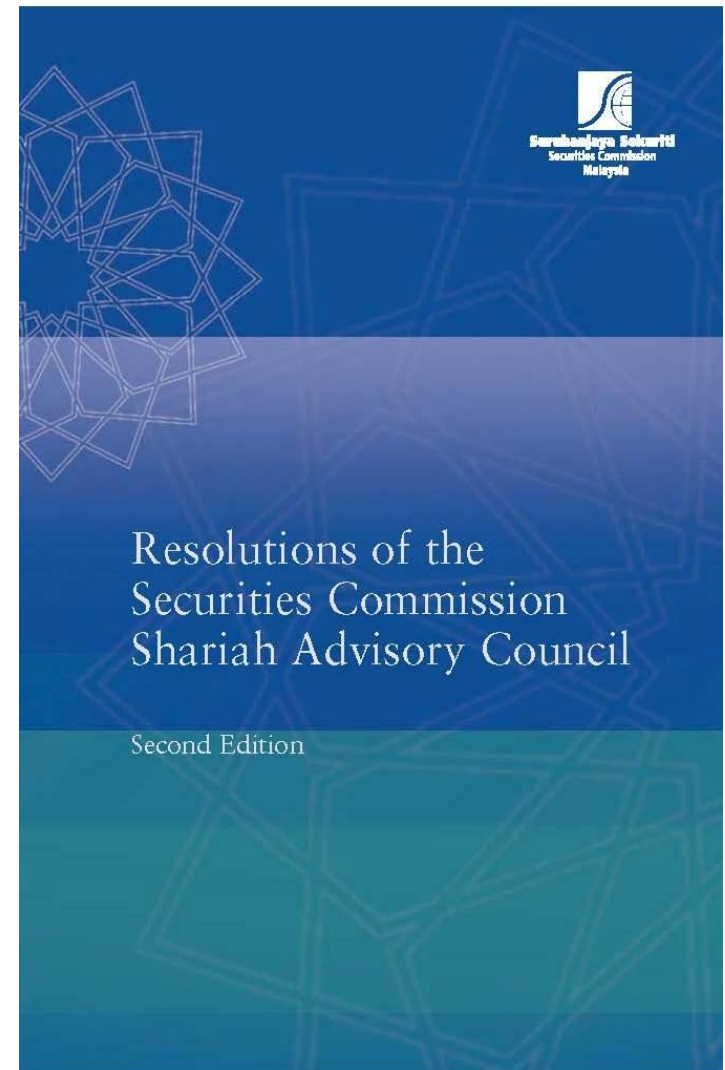
- Index dose not have "Maliyyat" feature.
 - Useful
 - Legitimate and legal
 - Deliverable and assignable
- Legal framework of commutative contract is broken.
- Neither seller nor buyer have the right to transfer index to the other party.



Practical experience of Islamic countries

- **Malaysia**

- “mechanism for stock index futures contracts does not contradict Sharia principles as long as the underlying index component is made up of Shariah compliant securities.”





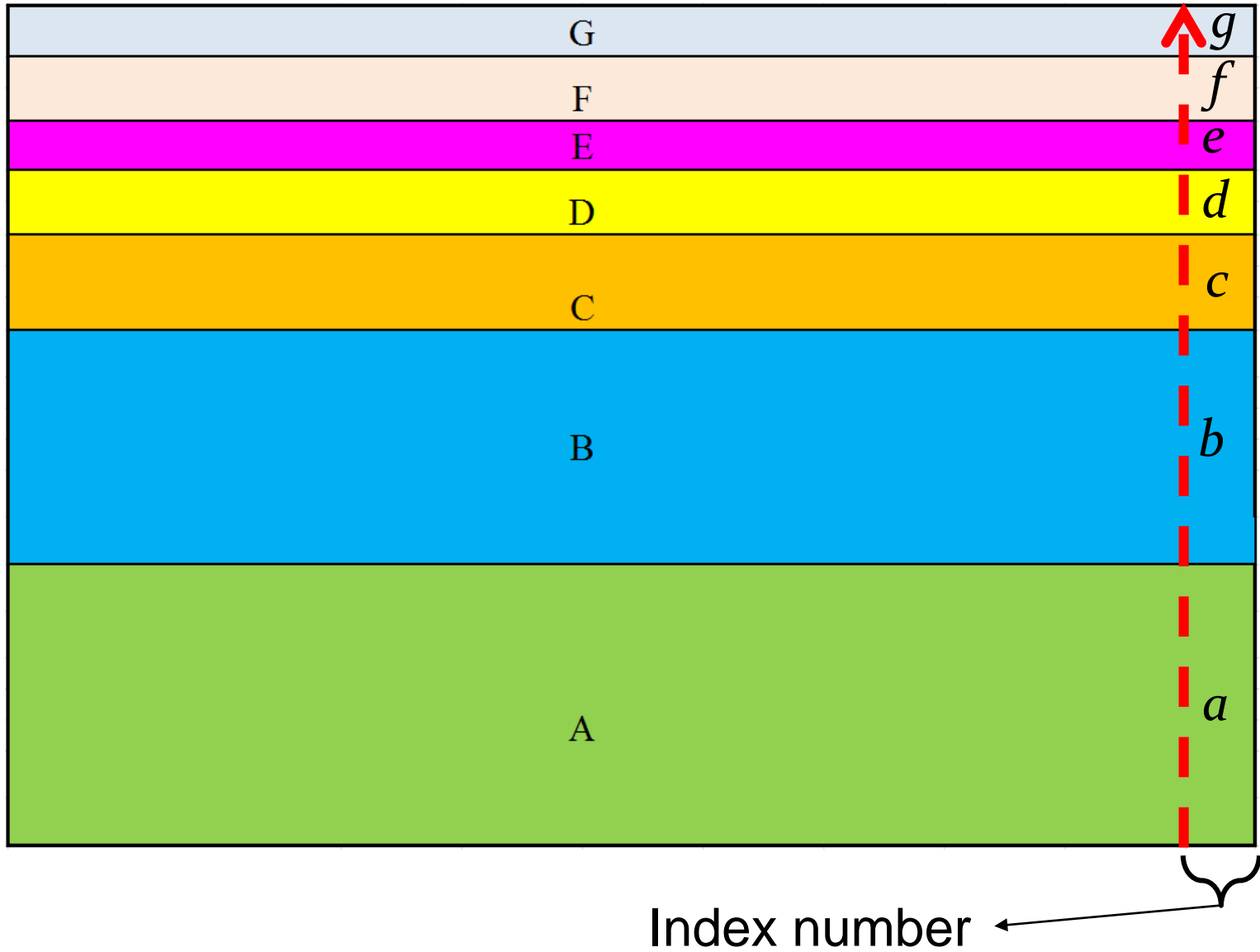
Index Basket Derivatives

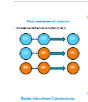
- **Purpose:**

legitimate asset which its value exactly equals to index at any moment.

$$I_t = \frac{\text{market capitalization of a group of shares at the } \textcolor{red}{\text{time } t}}{\text{market capitalization of the same group of shares at the } \textcolor{red}{\text{time } 1}} \times 100$$

Determining the underlying basket





Flowchart illustrating the process flow from input to output.

Index derivative Vs index basket derivative in practical view

Conventional index derivative		
Underlying Index (Top 30)	Multiplier	Contract Value
4,197	100 (\$)	419,700 \$

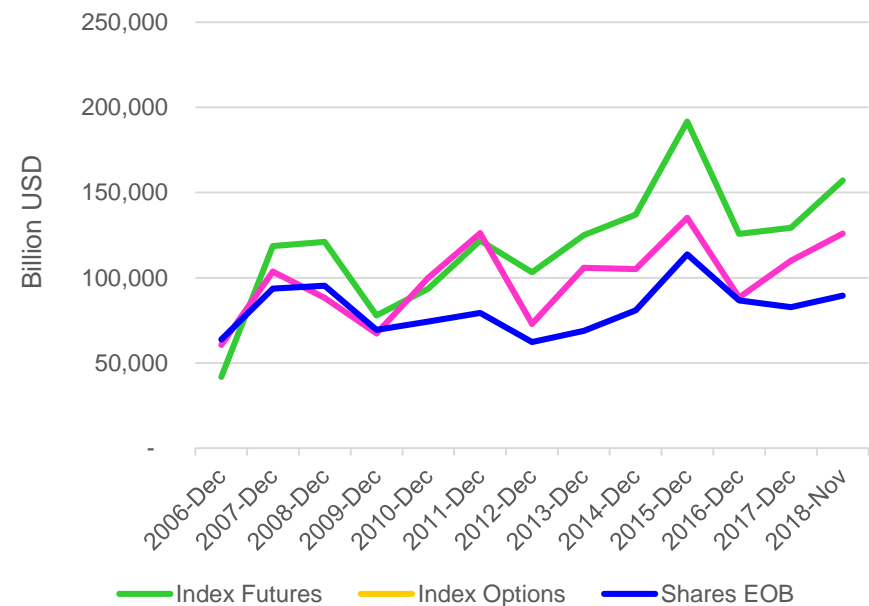
Conventional index derivative		
Underlying basket (Top 30)	Contract size	Contract Value
4,197 \$	100	419,700 \$

Stock	Number of shares in the basket	Market Cap in the Basket	Underlying Basket Value	Contract size	Contract Value
A	N_a	$N_a \times P_a$	$\sum_{i=1}^{30} (N_i \times P_i)$ $= 4,197 \$$	100	419,700 \$
B	N_b	$N_b \times P_b$			
.	.	.			
.	.	.			
.	.	.			
Z	N_z	$N_z \times P_z$			



Differences between index derivatives and index basket derivatives

1. Entire structure of index basket derivative is sharia compliant and conforms to the legal framework of commutative contracts.
2. Direct relation between index basket derivatives and real sector of market.
3. Lower risk of market crash.



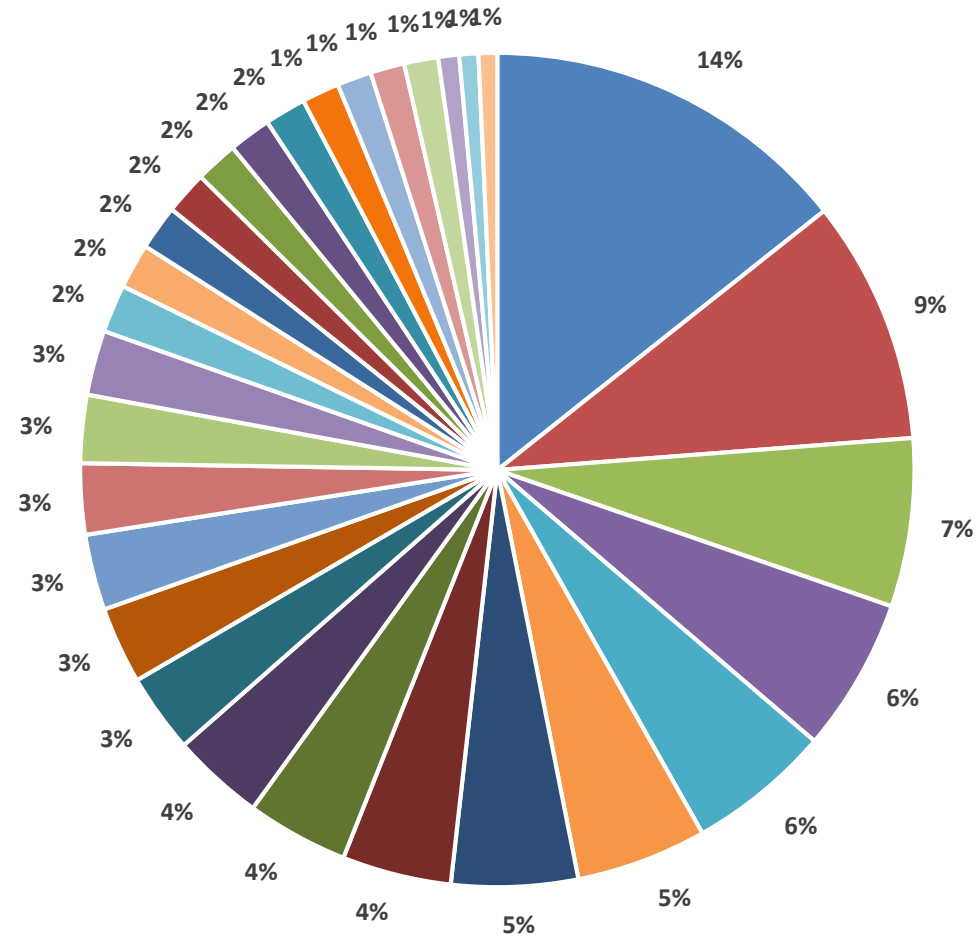


Launching the new instrument

- **Top 30 index**

- **Criteria:**

- Market cap
- Liquidity
- Trading value





Automotive industry index



ایران خودرو

Irankhodro

Refined Petroleum Products & Nuclear Fuel industry index



Bushehr
power
plant



Chemicals and By-products industry index




شرکت مجتمع گاز پارس جنوبی
s.p.g.c

Siraf gas condensate
refinery project

Metal Ores Mining industry index



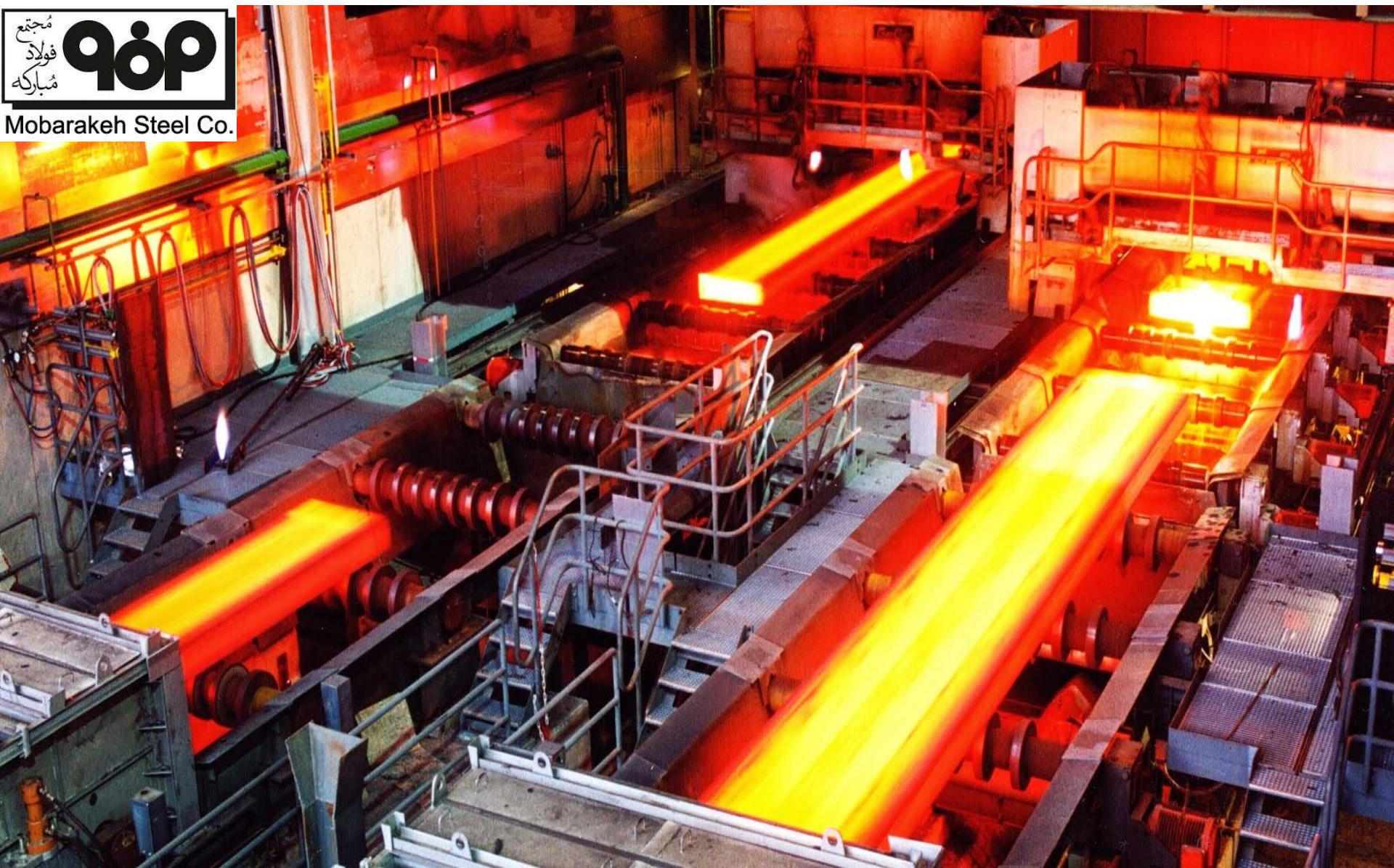
Gohar Zamin Iron Ore



Basic Metals industry index



Mobarakeh Steel Co.





Monetary intermediaries index

central bank of
Iran



Summary

