



انجمن تولیدکنندگان و صادرکنندگان سنگ آهن ایران
IRON ORE PRODUCERS & EXPORTERS ASSOCIATION OF IRAN

an overview of
Iran's Iron ore sector
&
survival strategies for SMEs

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- **Iron Ore Producers and Exporters Association of Iran (IROPEX)** is a national, non-profit organization ,founded in 2012
- members including: *Miners, Traders, Concentrate and Pellet producers*



“an overview of Iran’s iron ore industry”

1- Iron ore mines (case study)

Reserves, Production and Exports

2- SMEs:

*Acquisition, Merger, Vertical or Horizontal
Integration?*



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Iron ore mines (a case study)

Reserves, Production and Exports



Iran's Iron Ore Reserves

A General Overview:

Number of the Mines:

199

Total definite reserves:

3.3 billion tons

Total prospective reserves:

2.5 billion tons

type of ore:

About **75% Magnetite**

About **25% Hematite**

Average Fe content (Iran):

51%

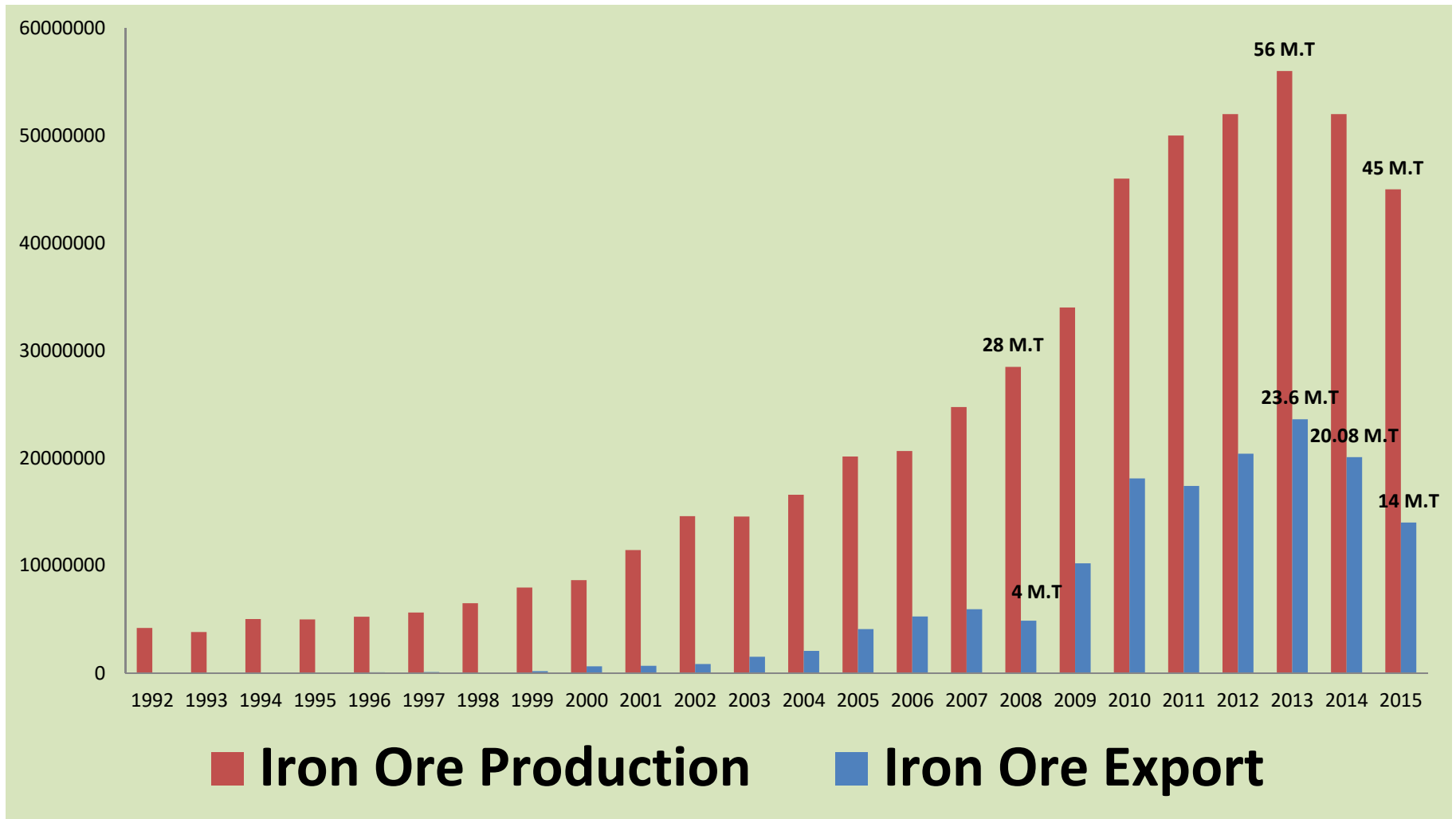
Average Fe content (world):

42%



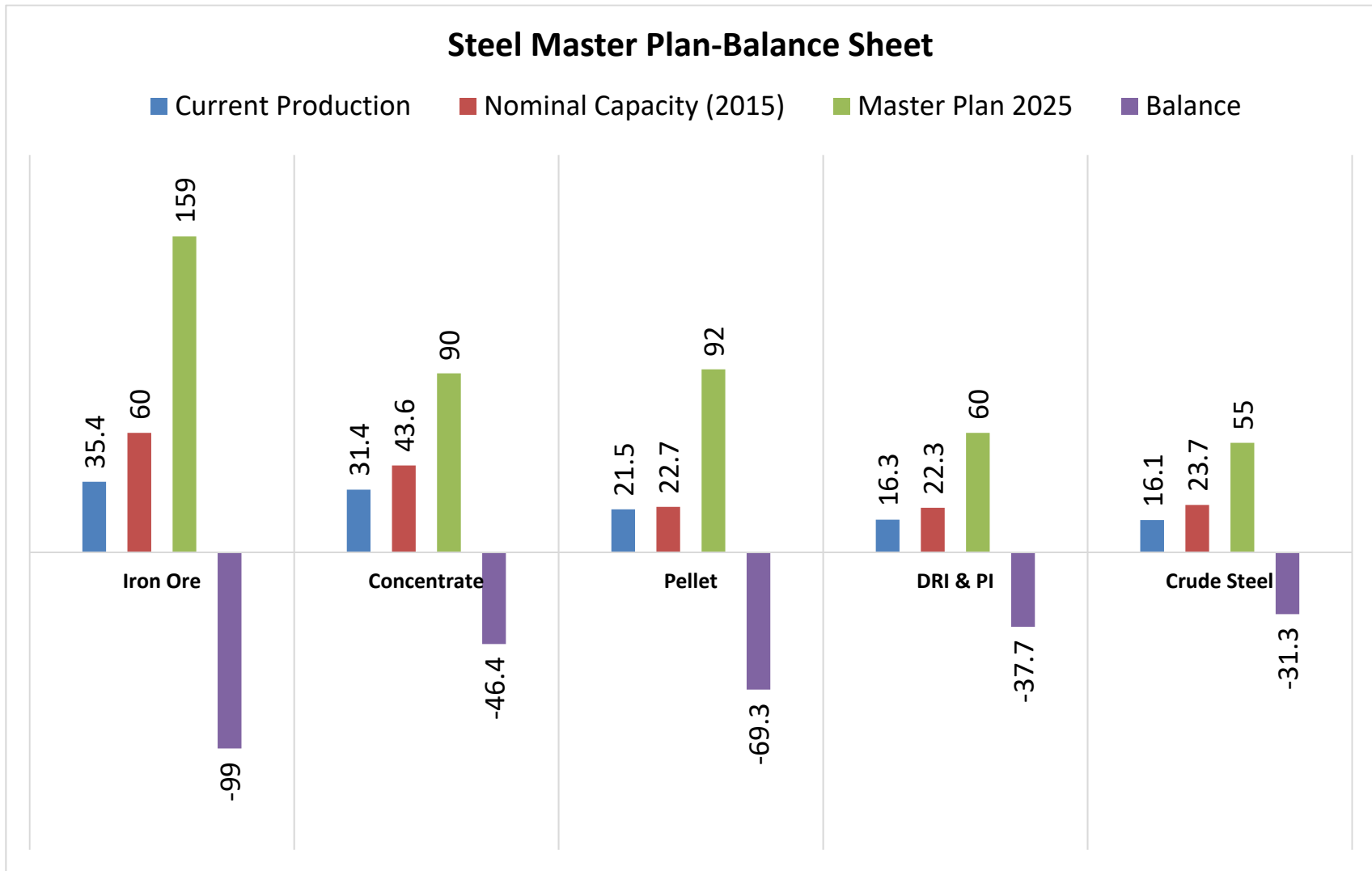


Iron Ore- Production and Export





Steel Chain Balance in master plan





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SMEs in Iran's mining Sector (with a focus on the iron ore mines)



Structure of Firms	Mining status in 2014					
	Number of mines	Share of Number (%)	Share of employment (%)	Share of Extraction (%)	Share from production value (%)	Share from Investment (%)
Small Scale (up to 50 employees)	5194	97	85	83	65	59
Medium Scale (50 to 100)	70	1.3				
Large Scale (more than 100)	91	1.6	15	17	15	41



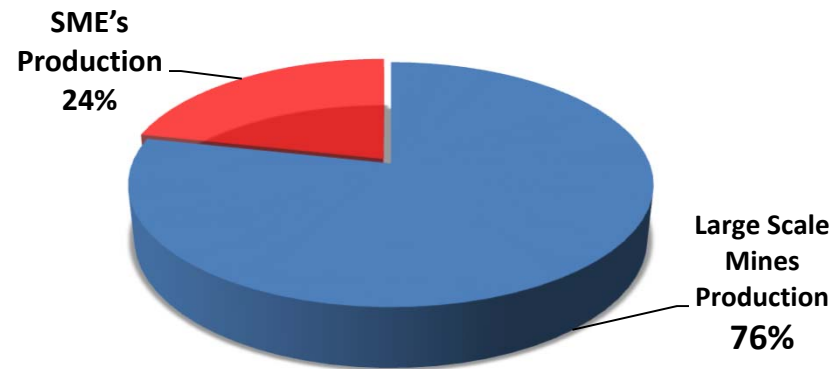
Iron Or, 2014's Status

2014	Number	Total Definite Reserves (BT)	Total Reserves (definite + probable)	Production (2014) (MT)	Share of proven Reserves	Share of Production
Iron Ore Mines	199	2.82	5.2	45	100	100
SMEs	188	0.42	1.5	10.9	5%-10%	24%
State/ Semi State Owned	11	2.4	3.7	34.1	85%-90%	76%

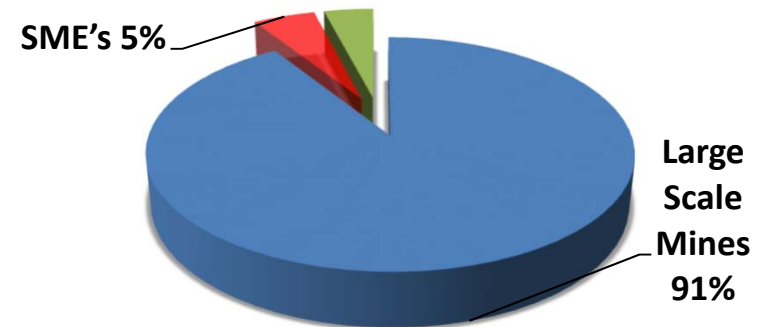


Iron Ore reserves and production Share

Production



Reserves





- SMEs have around 5%-10% proved reserves and 30 % of probable Iron Ore reserves
- They have 25 % of production capacity
- They should supply more than 20% of Iron Ore demand in 2025 (**32 MT** per annum)
- **However, producing iron ore fines is not feasible for most of them these days.**
- **about 20 iron ore mines are running across the country**



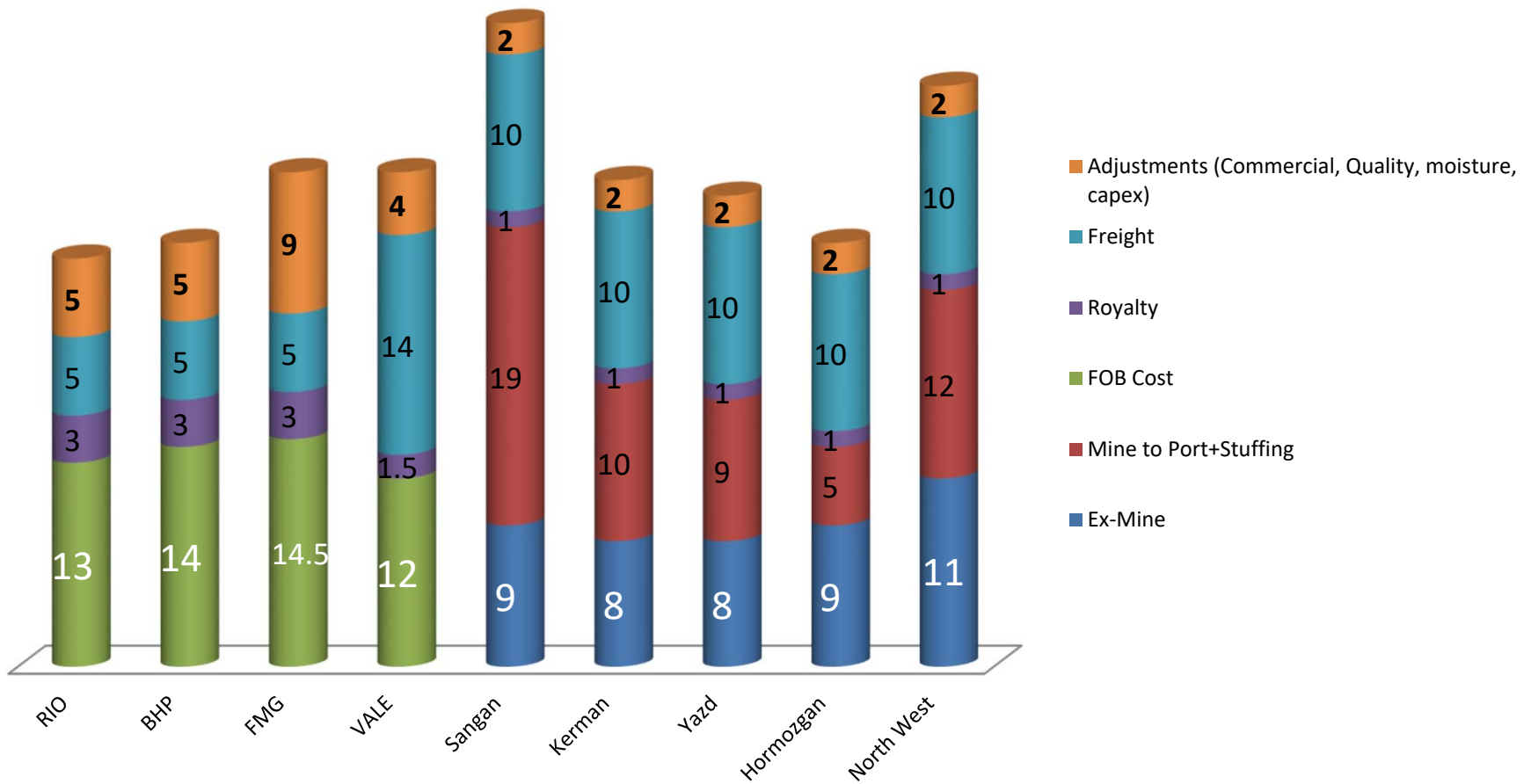
Iron Ore (fine & lump) - Production Costs

(Normalized for Fe 62 %)

Regions	Overheads & Capex	Cost Per Ton Ex Work	Transportation Cost	Stuffing Cost	Sea Freight Cost to China
Sangan	-	9	16	4	10
Kerman	-	8	7	4	10
Yazd	-	8	6	4	10
Hormozgan	-	9	2	4	10
North West	-	12	10	4	10



Comparative Cost Analysis Iranian Mines SMEs VS the Big 4





Advantages of SMEs

- **Low production cost**
- **Labor intensity and job creation**
- **Growth of domestic steel industry**

Challenges ahead of SMEs

- **Economy Scale**
- **Transportation costs**
- **Access to credit**
 - high interest rates due to inefficient banking system and low oil prices
- **Lack of support by the government**
- **Lack of business and legal information among SMEs**



Q: What is the solution?

A: Certain types of Horizontal M&A

- **IROPEX's studies show that:**
 - Producing concentrate is still feasible in most parts of the country
 - It is not possible for every single mine to develop a concentration and pelletizing plant
 - Each group of 3 up to 10 small mines could supply the ore necessary for a <1MT concentrate plant



Why Merger and Acquisition might be helpful?

Synergy: (i.e. Exploration and Extraction)

- Income increase
- Cost reduction
- Economy of scale
- Higher bargaining power

Inorganic growth possibility: (i.e. Processing units and regional concentrate plants)

- Increasing credit access capacity
- Increasing the debt capacity and financial flexibility



What is the best **solution** for **SMEs**?

Types of Mergers and Acquisitions

- ✓ **Horizontal merger** – Two or more mines with same reserves and capabilities
- ❖ **Vertical merger (Acquisition)**- A customer and company or a supplier and company. Think of a steel factory buying an iron ore mine.
- ✓ **Market-extension merger** - Two mines that sell their products in a certain market to reduce the transportation and marketing costs and increase their bargaining power in market.
- ✓ **Product-extension merger** - Two mines joining to produce concentrate using their ores.
- ❖ **Conglomeration** - Two companies that have no common business areas.



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4th International Conference On **IRON ORE**

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ASSOCIATION OF IRAN

Conference topics

- The Analysis of exit strategies for Iran's iron ore production crisis
- Requirements of resistance economy for policy making of Iran's Iron ore production
- Empowering Strategies for small and medium-sized mines
- Optimal model for value chain governance of iron ore
- Pathology of mining sector's governance system

+ workshops & B2B meetings





Thank You.

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