EVALUATING THE CURRENT STATE OF THE STEEL INDUSTRY:WORK IN PROGRESS

DSTI/SU/SC(2013)19

Filipe Silva
Laurent Daniel
Anthony de Carvalho

Paris, 5 December 2013

OECD
BETTER POLICIES FOR BETTER LIVES

Background

- Excess capacity has become one of the biggest challenges facing the steel industry;
- Excess capacity has an impact on the economic health of the steel industry;
- Past episodes of low demand and excess capacity have been associated with a proliferation of trade actions;
- This begs the question: is the industry in crisis yet?

Background (cont'd)

- In the autumn of 2013, the Steel Unit was asked to examine:
  - The financial health of the industry relative to the previous steel crisis;
  - What would happen if nothing is done to address excess capacity
- The preliminary study DSTI/SU/SC(2013)19 is work in progress. The questions it examines are:
  - Is the financial situation of the industry better or worse than in the late 1990s?
  - What is the impact of excess capacity on profitability?
  - The possible outlook for the industry

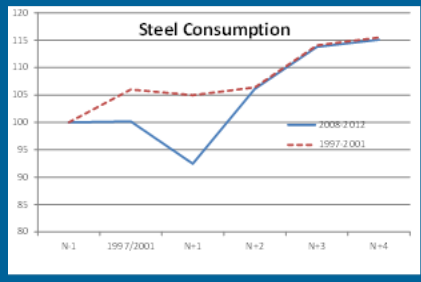
A comparison of two periods: 1997-2001 and 2008-2012

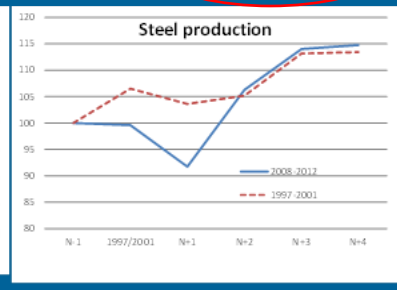
- Internal structural problems are usually at the origin of steel crises
- External economic events usually trigger the crises:
  - 1997-2001 : Trade disruptions caused by the Asian financial crisis and downturn in Russia
  - 2008-2012: the economic shock following the 2008 financial crisis

2008-2012: Faster capacity expansion and slower export growth than in 1997-2001

Average annual growth during the two 5-year periods

	Production	Consumption	Capacity	Exports (finished)
1997-2001	2.6	2.9	1.7	4.9
2008-2012	2.8	2.9	5.0	-1.4

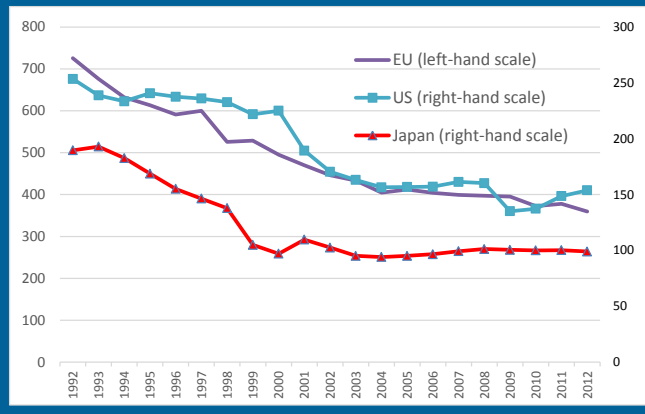




Sources: OECD and the World Steel Association.

Employment decrease in the steel industry is slower than in the 90's

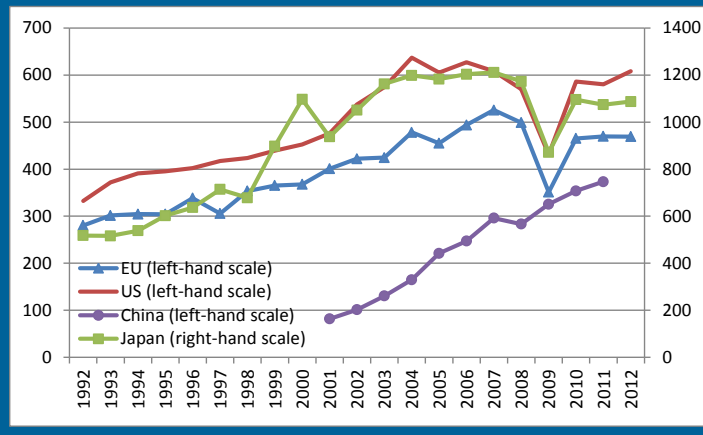
Employment in the steel industry in selected advanced economies
In thousands



Source: OECD, CIS report

Growth of labour productivity has slowed significantly

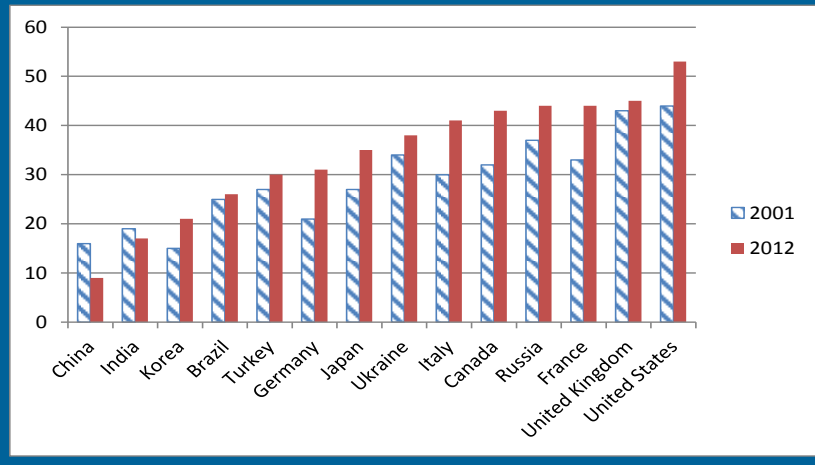
Labour productivity in the steel industry in selected economies
In tonnes of crude steel production by employee and by year



Sources: OECD, CIS report

An ageing industry in many OECD economies

Age of blast furnaces by economy



Sources: World Steel Dynamics' Plantfacts database

Financial performance during 1997-2001 and 2008-2012

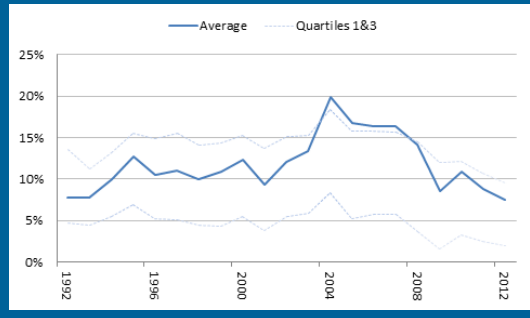
Key findings:

- The performance is worse than in 1997-2001.
- Worrisome factors :
  - very low operating profitability levels
  - free cash flows are negative
  - debt levels are very high
  - increasing focus on short-term credit
  - very low levels of investments in R&D

Deteriorating and low operating profitability in the steel industry

- EBITDA on sales reached 7.6% in 2012
- 83% of steel firms with Ebitda/sales < 16%

EBITDA on sales

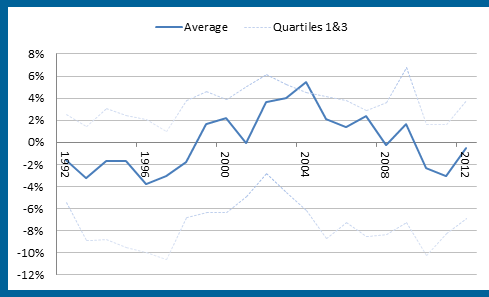


Source: OECD calculations based on data from Factset.

Very low cash flows

- Free cash-flow below zero since 2009.
- External funds needed to cover investment or even operational activities.

Free cash flows on sales

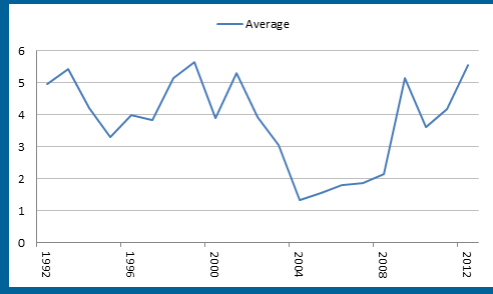


Source: OECD calculations based on data from Factset.

Rising debt ratios

- Debt on EBITDA ratio was 5.6 in 2012
- Close to the record level of 1999

Debt on Ebitda

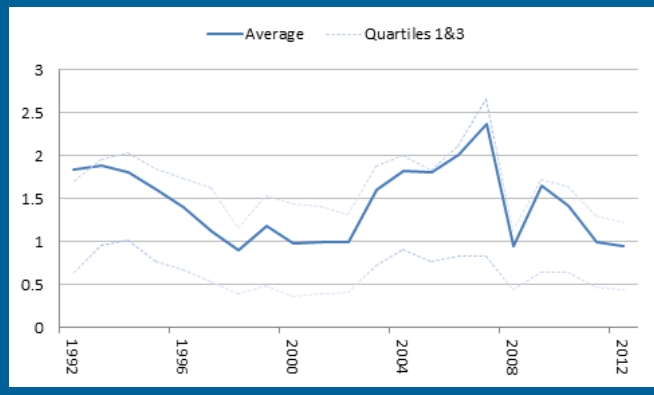


Source: OECD calculations based on data from Factset.

Investment opportunities are increasingly low in the steel industry

- Price-to-book below unity (0.95 in 2012).

Price-to-book ratio



Source: OECD calculations based on data from Factset.

How does the capacity utilisation rate (CUR) affect steel industry profitability?

Key points:

- Industry-wide CUR impacts firm operating profitability (coefficient is approximately 0.3).
- Raw material prices also play a significant role in steelmakers' profits.
- Inventories held also matter for profits.
- Debt works as a burden on profits.
- Size of firms and concentration in the industry also affect profits.

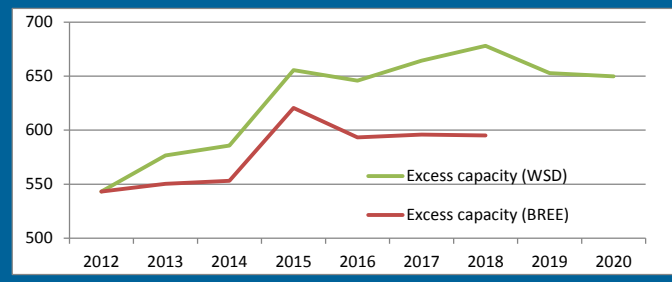
Selected results of the panel regressions

Table 2. Determinants of profitability at the firm level

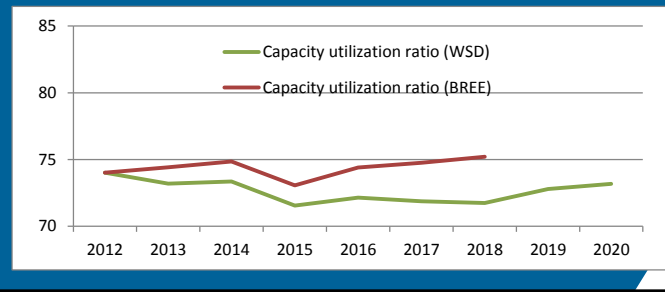
	FE	RE	AB
	(1)	(2)	(3)
L.EBITDA_SALES			0.34
			(0.05)***
			[0.24 - 0.44]
CAP_UTIL	0.27	0.43	0.24
	(0.04)***	(0.11)***	(0.04)***
	[0.20 - 0.34]	[0.20 - 0.65]	[0.16 - 0.31]
RAW MAT BASKET	-0.10	-0.20	-0.04
	(0.02)***	(0.05)***	(0.03)
	[-0.14 - -0.06]	[-0.29 - -0.10]	[-0.09 - 0.01]
IP_WLD	0.03	0.13	-0.05
	(0.03)	(0.06)*	(0.04)
	[-0.03 - 0.08]	[-0.00 - 0.25]	[-0.12 - 0.02]
I_ASSETS	10.36	12.81	-3.94
	(2.63)***	(2.57)***	(4.18)
	[5.19 - 15.52]	[7.77 - 17.85]	[-12.13 - 4.25]
RD_D	-0.36	0.09	-1.49
	(0.56)	(0.50)	(0.64)**
	[-1.46 - 0.75]	[-0.88 - 1.07]	[-2.74 - -0.24]
DEBT_ASSETS	-9.72	-9.98	-9.94
	(1.82)***	(1.67)***	(2.63)***
	[-13.30 - -6.14]	[-13.26 - -6.70]	[-15.10 - -4.78]
MKTS_R	7.35	5.82	8.03
	(2.97)**	(2.08)***	(4.05)**
	[1.53 - 13.18]	[1.74 - 9.89]	[0.10 - 15.96]
INVENT_ASSETS	6.57	6.70	12.62
	(3.74)*	(3.18)**	(3.35)***
	[-0.78 - 13.91]	[0.46 - 12.94]	[6.04 - 19.19]
GROUP		4.22	
		(0.87)***	
		[2.51 - 5.93]	
SOE_***		-5.42	
		(4.03)	
		[-13.32 - 2.47]	
SOE		0.45	
		(3.87)	
		[-7.13 - 8.03]	
LARGE		5.48	
		(1.80)***	
		[1.96 - 9.01]	
_cons	-10.56	-32.12	-7.64

- Excess capacity to remain high
- Capacity utilization ratio at 75% or less

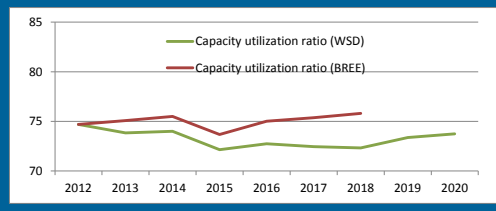
Global steelmaking Excess capacity (mmt)



Global capacity utilization ratio (%)



Operating profitability not expected to significantly increase in the next 5 years



- Capacity utilisation expected to remain low in the future under different scenarios
- Excess capacity will continue to weigh on profitability of the industry
- However, many other factors are important for profitability:
  - Raw material prices
  - Strength of the business cycle
  - Firm-level behaviour