

Russian's steel and ferroalloys market. Outlook 2013-2014

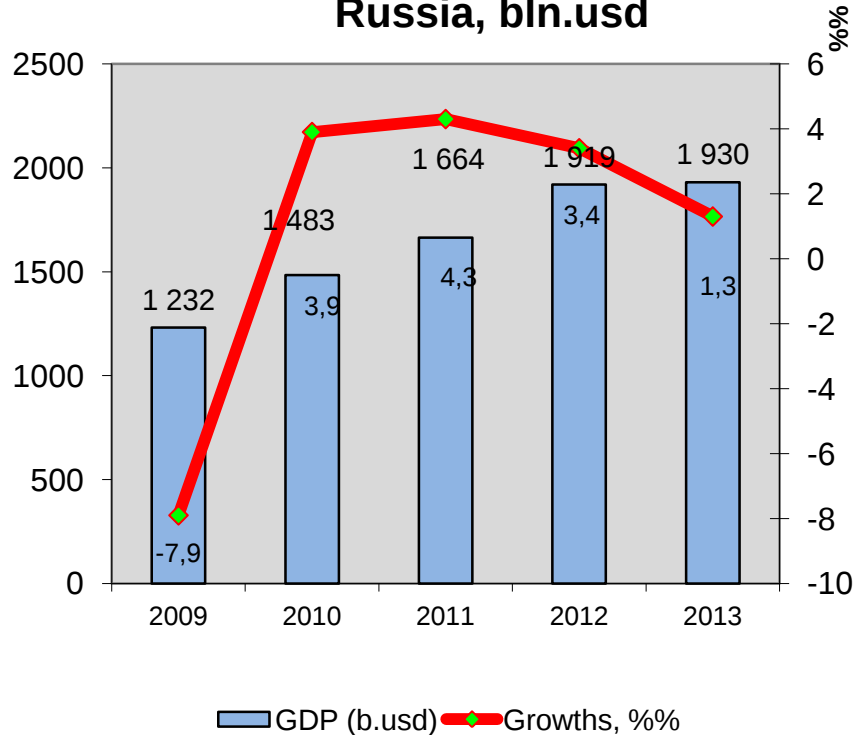
- **Economy situation**
- **Steel production**
- **Ferroalloys production and demand**
- **Analysis of Competition**
- **Solutions**



Economy situation in Russia



Gross Domestic Product in Russia, bln.usd

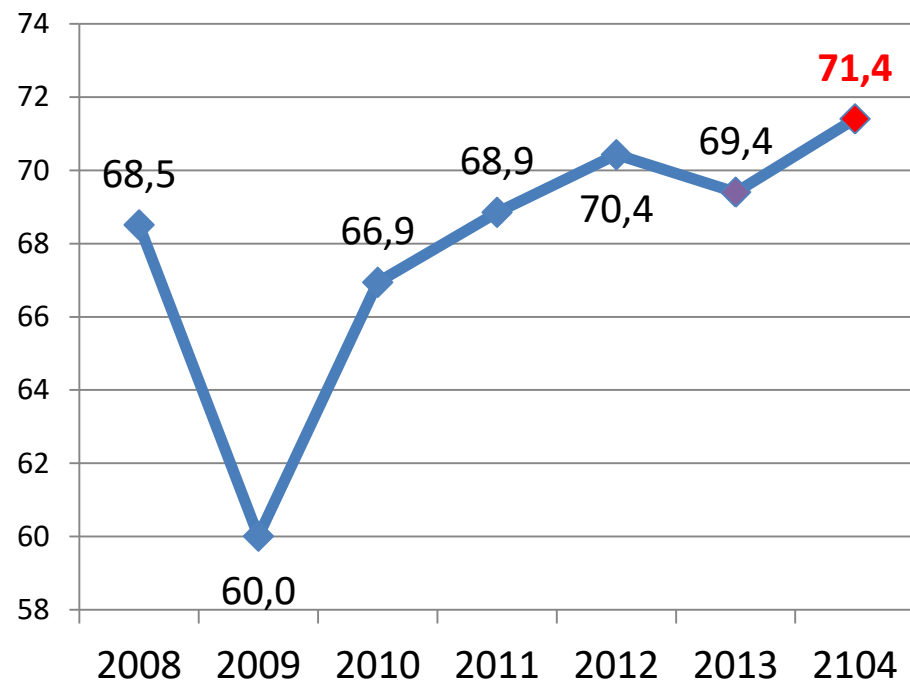


The main Economic Indicators

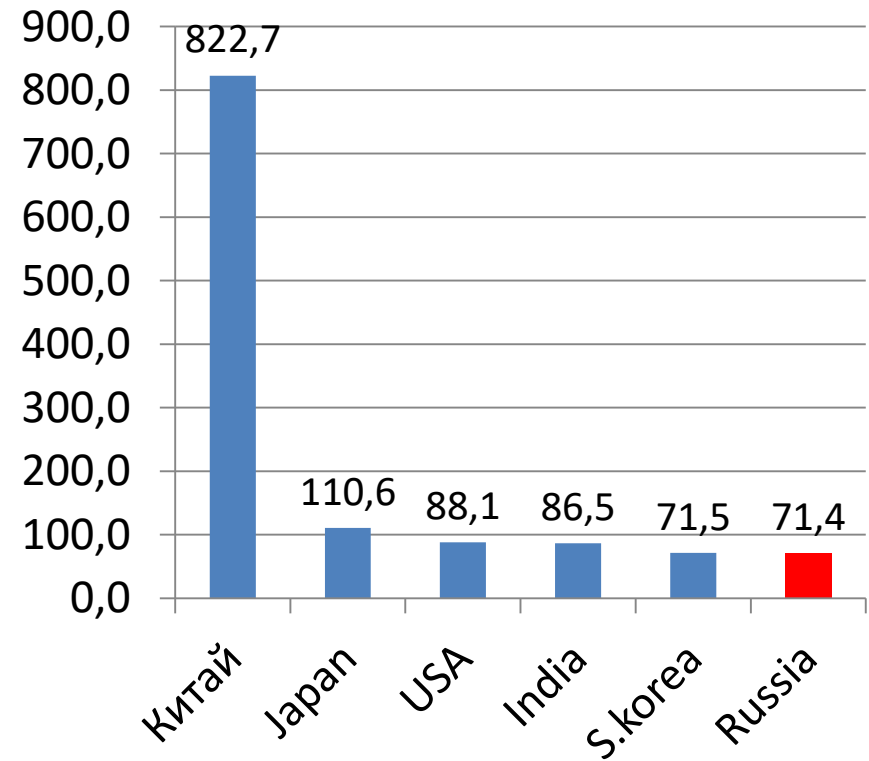
	2009	2010	2011	2012	2013
GDP (bln. Usd)	1231.6	1483.4	1664.2	1919.4	20302
Growth GDP ,%%	-7.9	3.9	4.3	3.4	3,3
GDP per capita (usd)	8 696	10 485	11 781	13 800	14 500
Inflation,%%	8.8	8.8	6,1	5,1	5,0
Industrial Growth,%%	-9.6	8,2	4,7	2,6	2,6
Average salary, usd	588	698	806	859	890

Steel production in Russia, 2014

Production steel in Russia,
mln. mt



The largest steel producers ,
mln mt

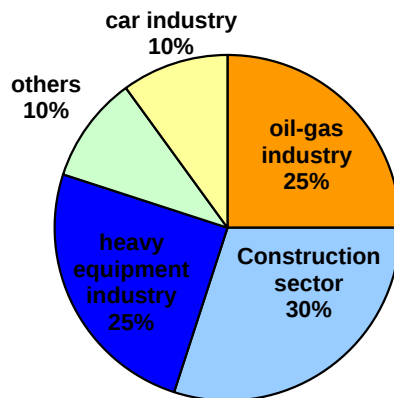


Russia steel industry

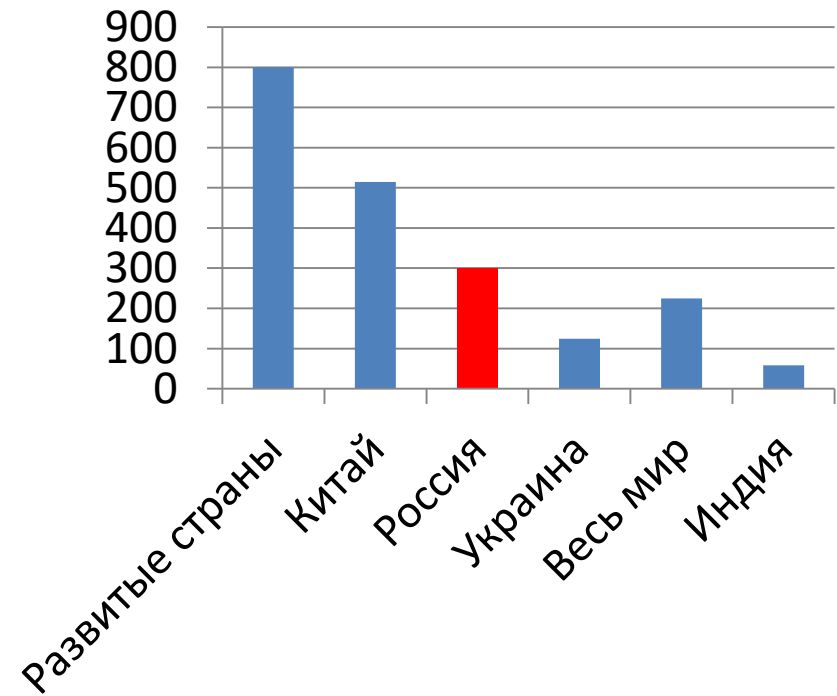
	2012	2013	2014
EvrazHolding	11 524	11 795	11 793
MMK	12 161	11 917	12 989
Severstal	10 558	10 683	11 216
Lipetsk	12 183	12 400	12 804
Metalloinvest	5 619	4 682	4 508
Mechel	4 990	4 346	3 971
TMK (pipe company)	2 750	2 700	2750
CHTPZ (pipe company)	800	850	850
OMK (pipe company)	900	900	900
Others	8 894	8 968	9672
Summ	70 379	69 241	71 453

Перспективы потребления стали в России

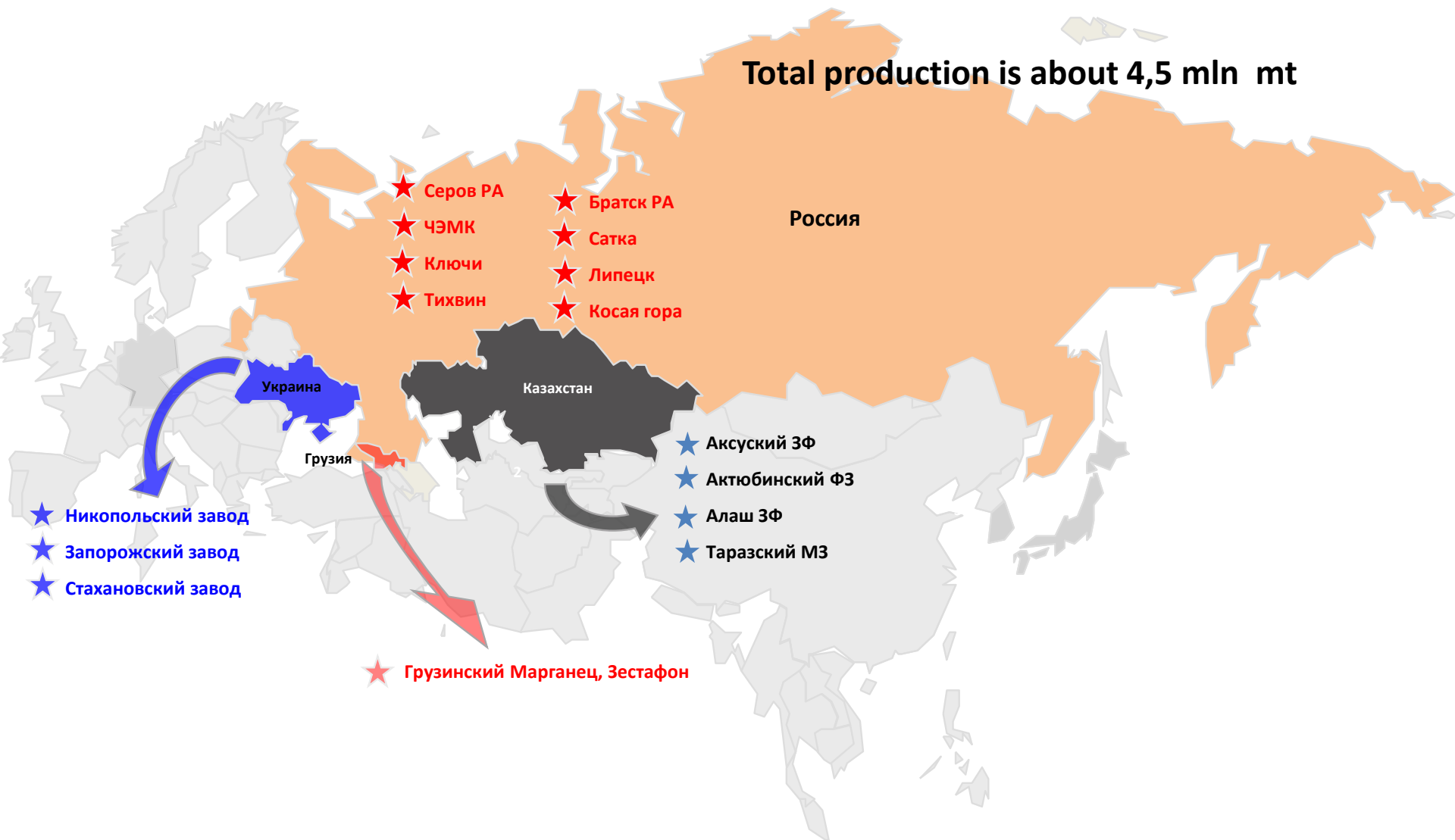
Structure domestic consumption of steel products in economic of Russia



Потребление стали на душу населения в ряде стран, кг/чел



Russian ferroalloys industry, as part of Ferroalloys industry of CIS



Russian production of FeSi, SiMn, FeCr, FeMn in 2014, (1000 mt)

											
	ChEMK	Serov	Tihvin	Bratsk	Lipetsk	SGMK	kluchi	Metalleks	Kosay Gora	Satka	Total
FeSi	510	35,8		88,9	23,2			12			669,9
SiMn	154					28,6					182,6
HC FeCr	21,5	101,8	56,2								179,5
LC FeCR	161,4	109,6					3,9				274,9
FeMn									68,3	108,3	176,6
Total	846,9	247,2	56,2	88,9	23,2	28,6	3,9	12	68,3	108,3	1484

Consumption Ferroalloys in Russia (000* mt/year)

 Russia					
'000 mt	2011	2012	2013	2014	consumption kg/mt of steel
FeSi	215	203	196	182	3,7
SiMn	470	488	446	456	6,5
FeMn	155	157	151	153,9	2,6
FeCr	55	47	42	41	0,9
Total	910	957	835	832	12,1
Average consumption ferroalloys on the world market is 20 kg/mt of steel					

Consumption ferroalloys by Russian steel mills

mt/month

	Steel production mio mt	SiMn	FeSi-65/75	FeMn-78	HC FeCr	LC-MC FeCr	Summ
EvrzHolding	11,79	9 300	1800	210	210	210	11 730
MMK	11,9	7000	2500	1300		210	11 010
Severstal	10,6	3 000	1300	2000	40	70	6 410
Lipetsk	12,4	3 000	2000	3000		70	8 070
Metalloinvest	4,6	4 000	1300	210	840	350	6 700
Mechel	4,3	1 500	2000	4000	1000	210	8 710
TMK		1 700	350	500	140	210	2 900
CHTPZ		1 000	100	70			1 170
OMK		700	210	70	140	70	1 190
Others	13418	4 000	500	1000	1000	700	7 200
Summ	69,241	35 200	12 000	12 360	3 370	2 100	65 090

Manganese Alloys

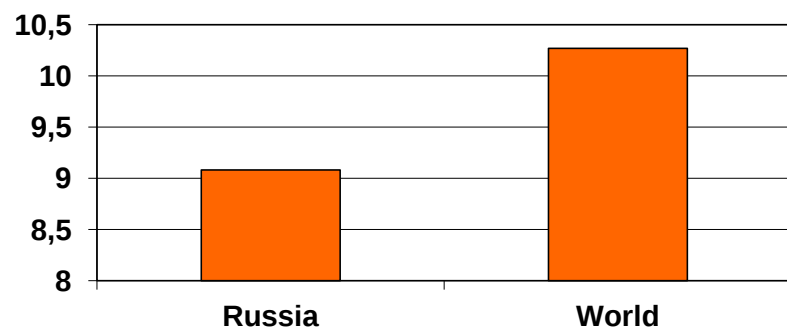
	HC FeMn	SiMn	Refined FeMn
Application	Extensively used in manufacturing normal steel and high-carbon steel	Mainly used as the compound steel-making deoxidization agent and alloying agent to produce steel	Important material for manufacturing stainless steel, heat resistant steel and electric welding electrodes
Production	85% produced in BF by integrated plants. Mini-mills use EAF for smelting.	Produced in EAF only either by mini-mills (75%) or integrated steelmakers.	Produced from HC FeMn via OBC route or SiMn via electrothermic route
Specification	- Mn 70-82% - C 8.0% max - Si 2.0% max - P 0.5% max - S 0.03% max	- Mn 60-70% - C 0.1-3.5% min - Si 10-35% - P 0.05-0.35% max - S 0.03% max	- Mn 75-85% - C 0.1-2.0% max - Si 2.0% max - P 0.15-0.35% max - S 0.03% max

- SiMn has a more diverse range of applications than FeMn and accounts for 59% of the global output of manganese alloys
- SiMn is able to reduce oxygen from steel. This property makes SiMn a suitable substitute for FeSi in oxidation during the steelmaking process when the FeSi price is relatively higher than that of SiMn

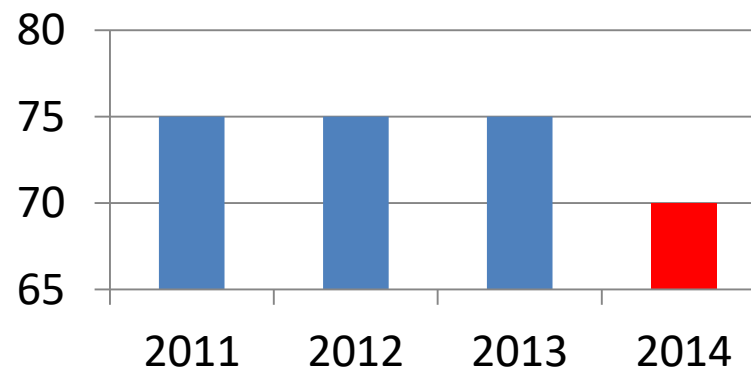
Mn alloys

	Yearly consumption in Russia, mt					Consumption per mt of steel, kg
	2010	2011	2012	2013	2014	
SiMn	450 700	470 000	488 000	446 00	456 000	6,48
FeMn-78	134 300	140 000	142 000	151 200	140 000	2,35
LC-MC FeMn	12 200	12 500	15 000	19 500	13 900	0,25
Summ	597 200	622 500	645 000	631 700	609 900	9,08

Consumtion Mn alloys per 1 mt
steel, kg

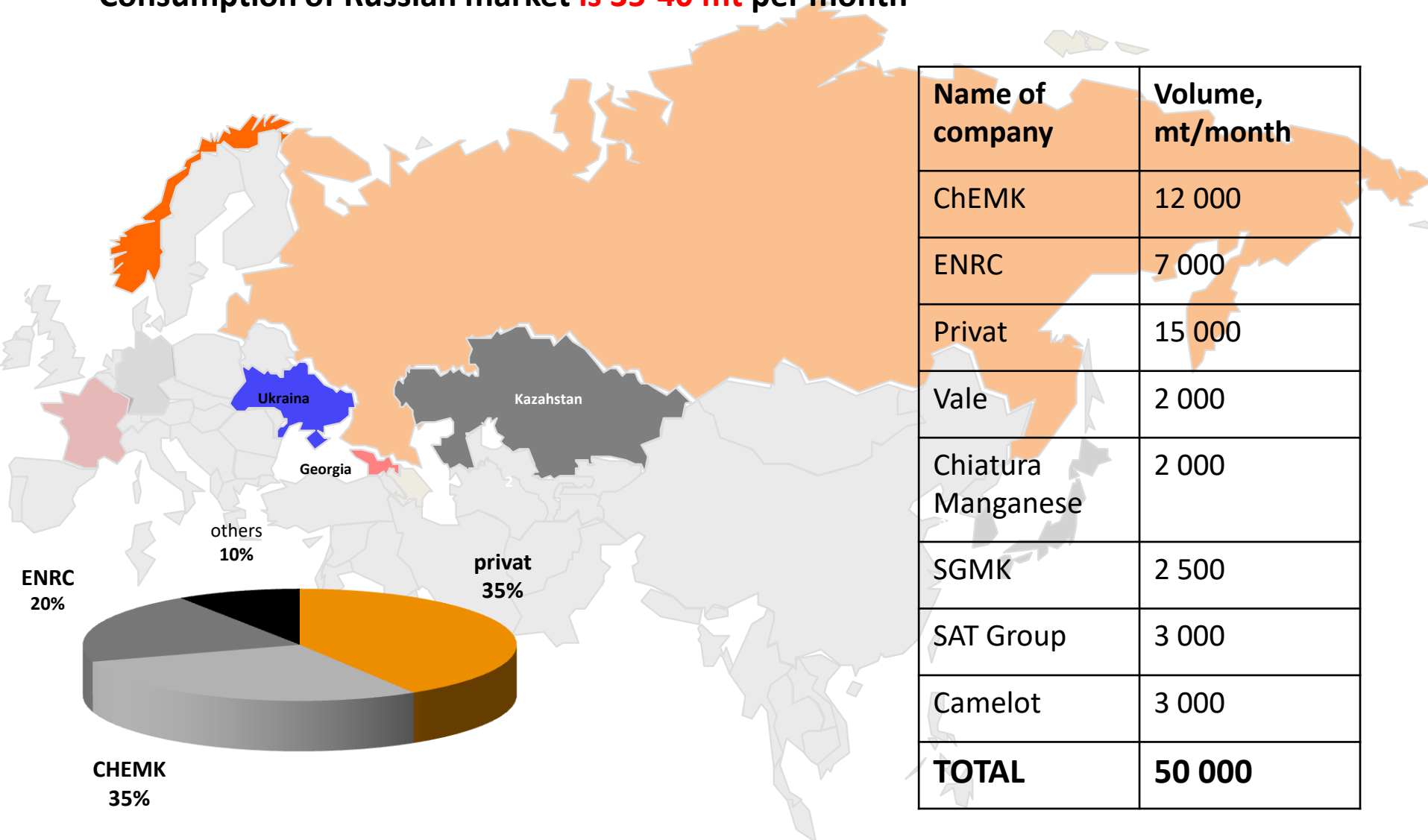


%% of SiMn in toatal consumption of
Mn alloys



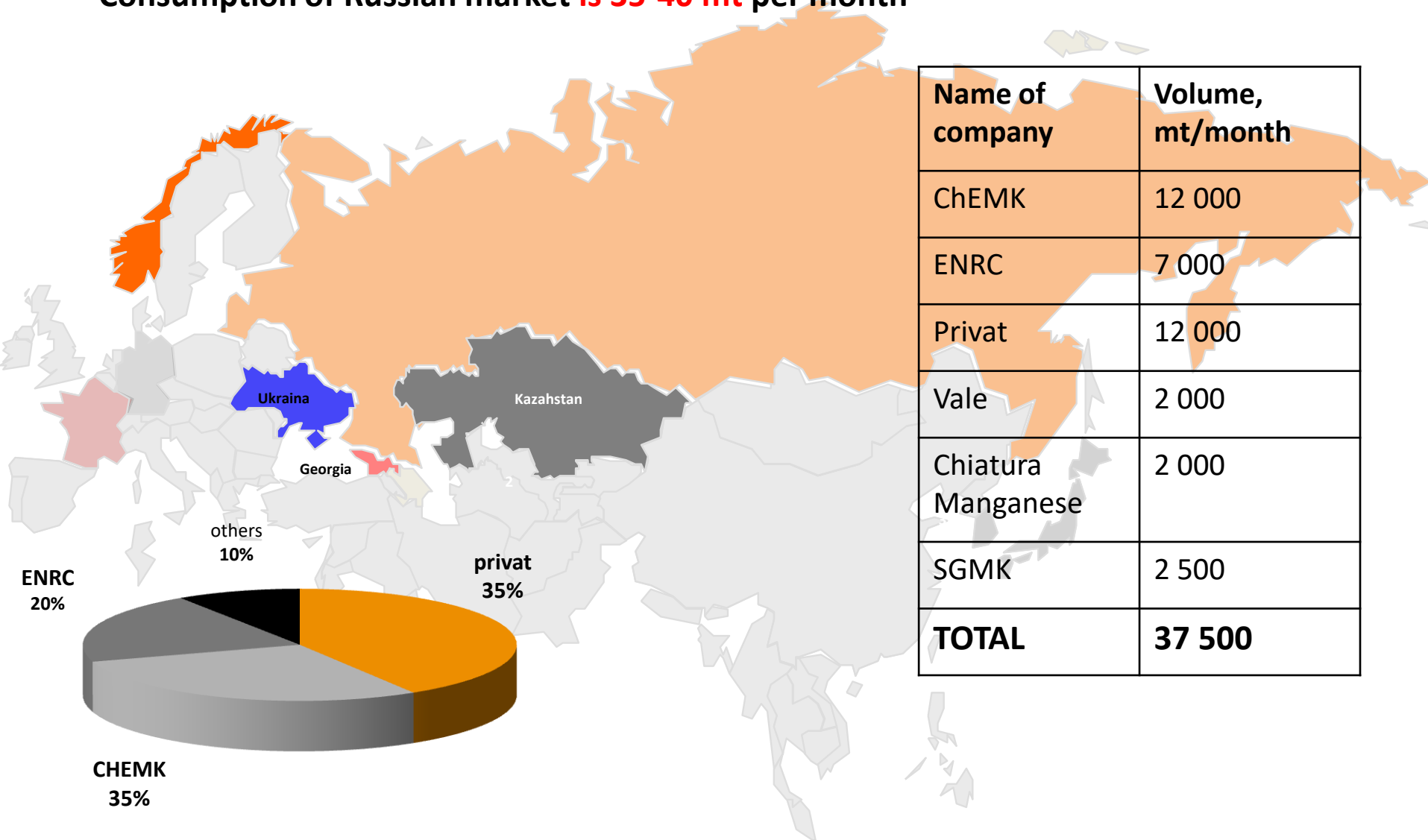
Russian market review. Russian SiMn market

Consumption of Russian market is 35-40 mt per month

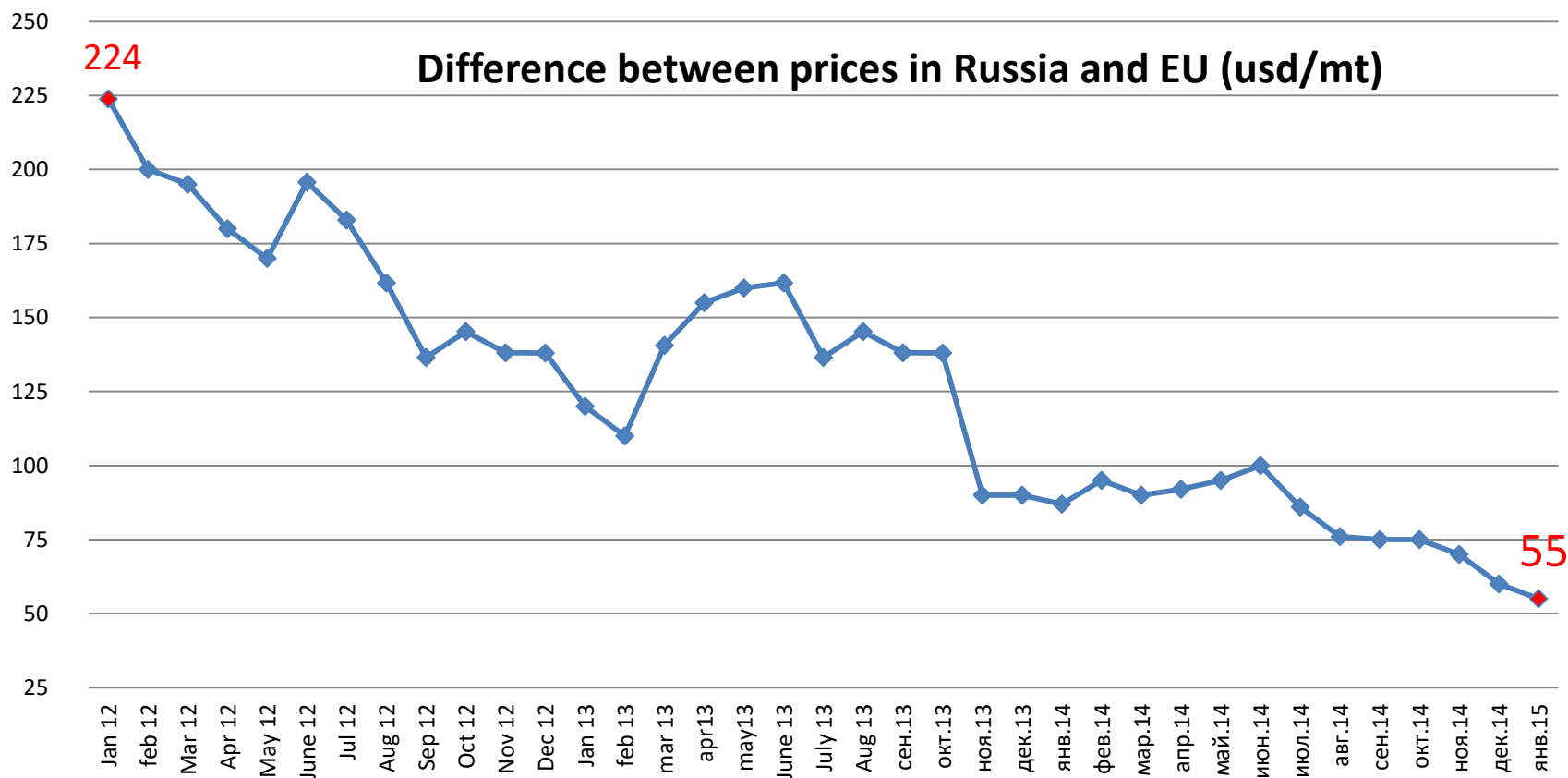


Russian market review. Russian SiMn market

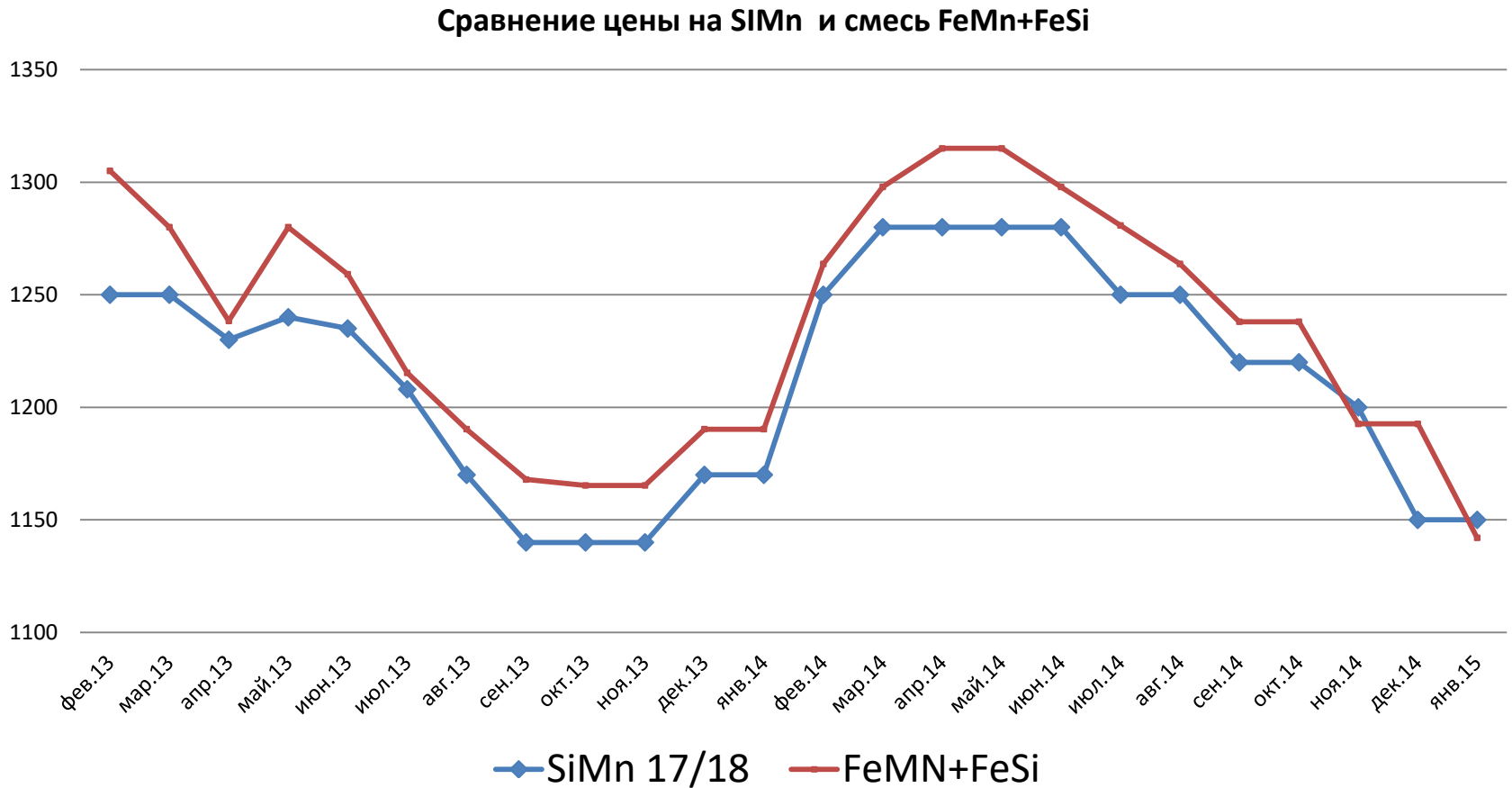
Consumption of Russian market **is 35-40 mt** per month



Tendency on the Russian market SiMn



Price understanding and limitation of price



FeSi Alloys

	FeS-45	FeSi-65/75	Refined FeSi
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Россия на мировом рынке ФС

Мировое производство



Общее мировое производство
составляет 7,14 млн. тн

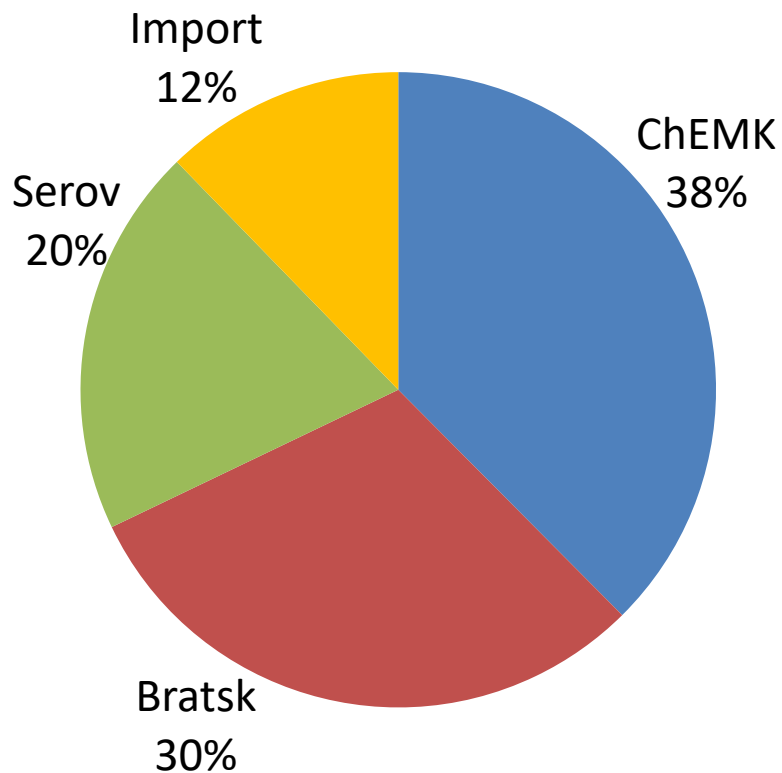
Мировой экспорт



Общий экспорт ферросилиция
составляет 948 тыс. тн

FeSi market

Russian market (203 000 mt)

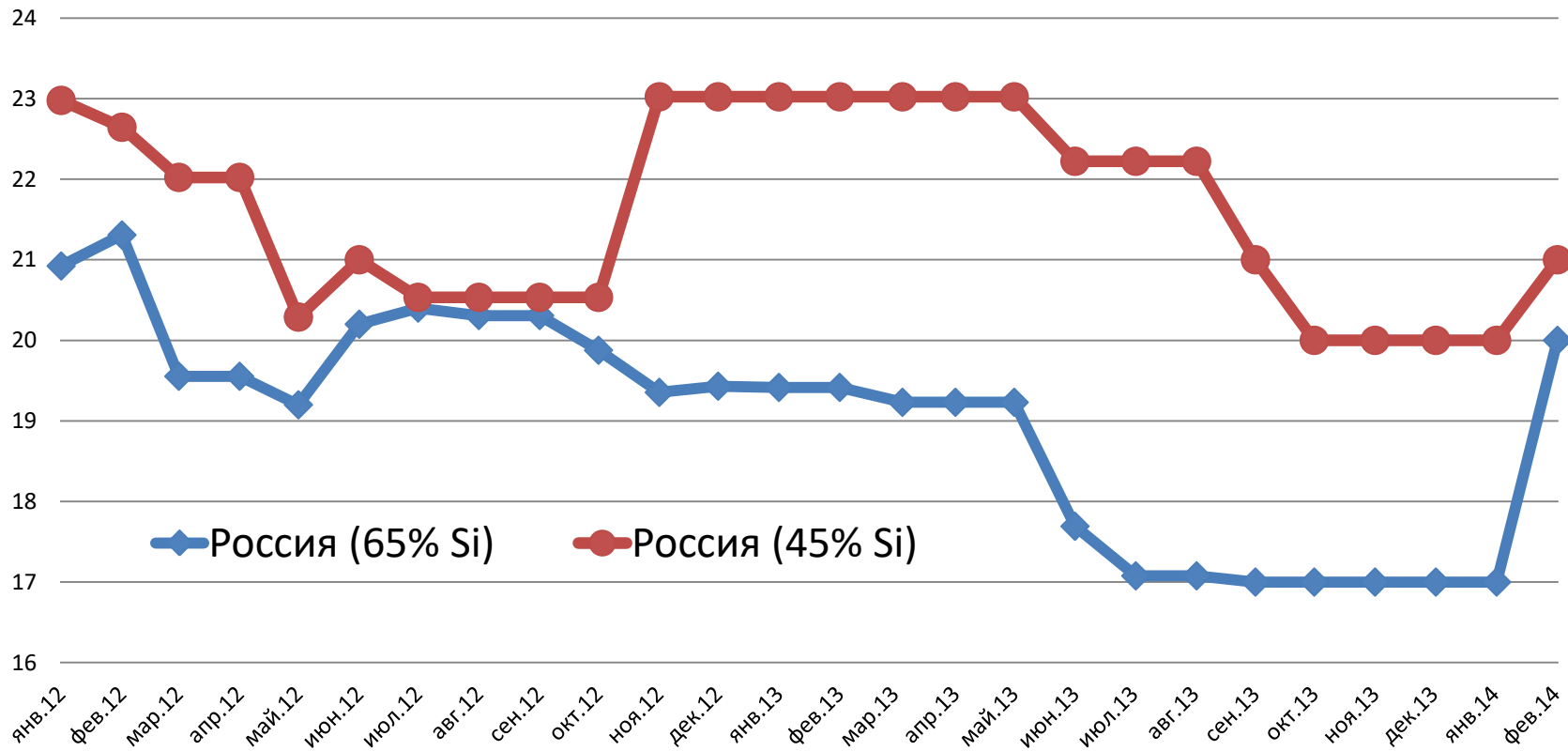


Producers FeSi in Russia

Producer	Volume, mt
CHEMK	510 000
Bratsk	98 000
Serov	35 000
NLMK	22 000
Metalleks (FeSi-45)	9 600

FeSi

Цена ферросилиция в РФ за 1% Si



Феррохром

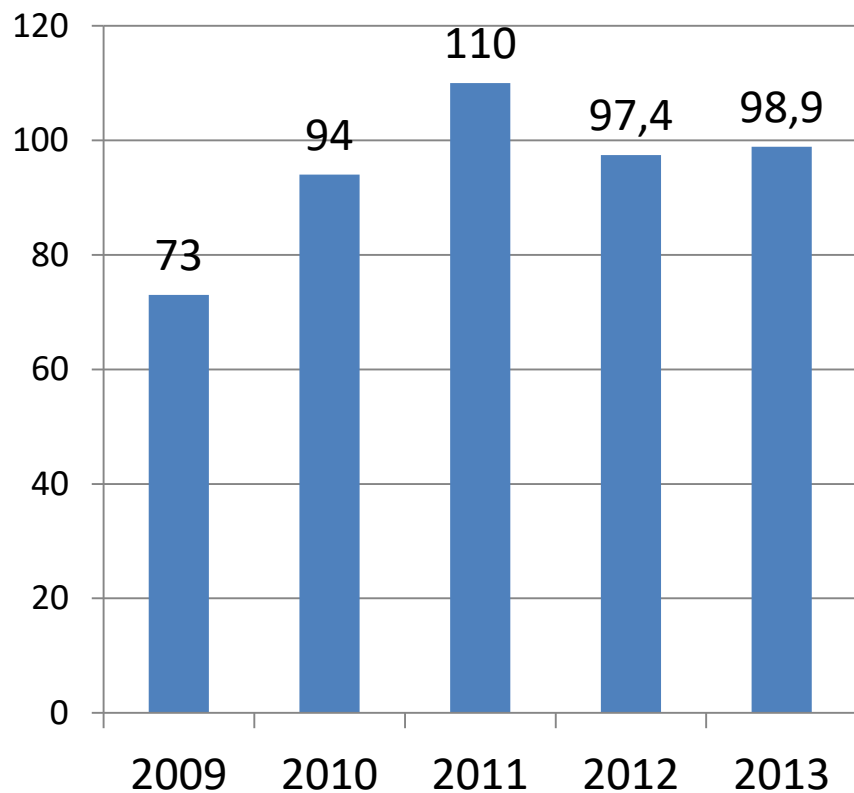
Нержавеющая сталь в РФ



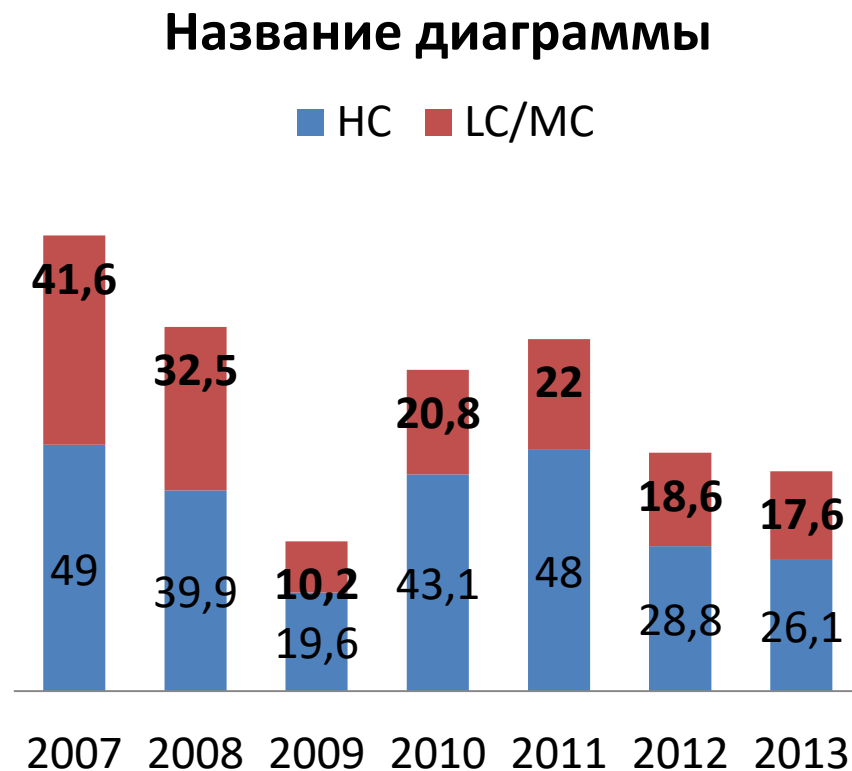
Потребление НЖ стали неуклонно растет, а производство падает из-за проблем у Мечела

FeCr in Russia

Production stainless steel in Russia
(*000 mt)

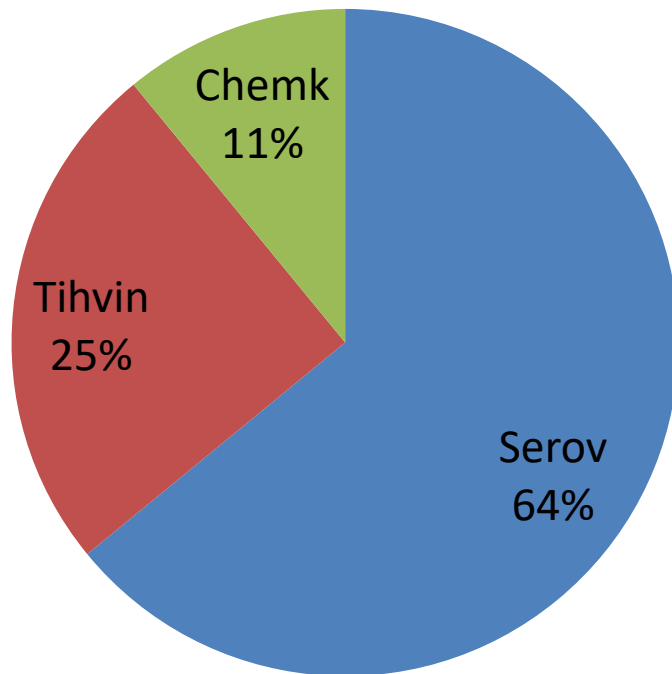


Production stainless steel in Russia
(*000 mt)

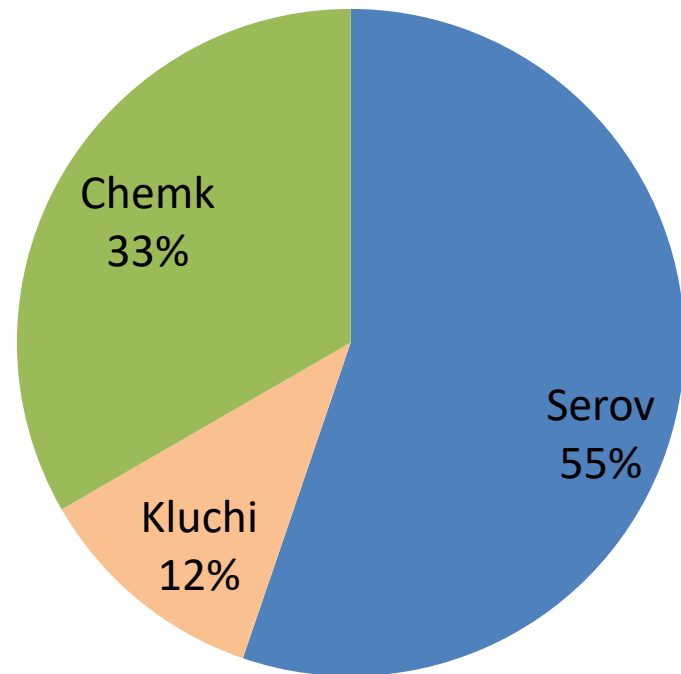


Russian market of FeCR

Total **HC** market is 26 100
mt/year



Total **LC** market is 17500
mt/year

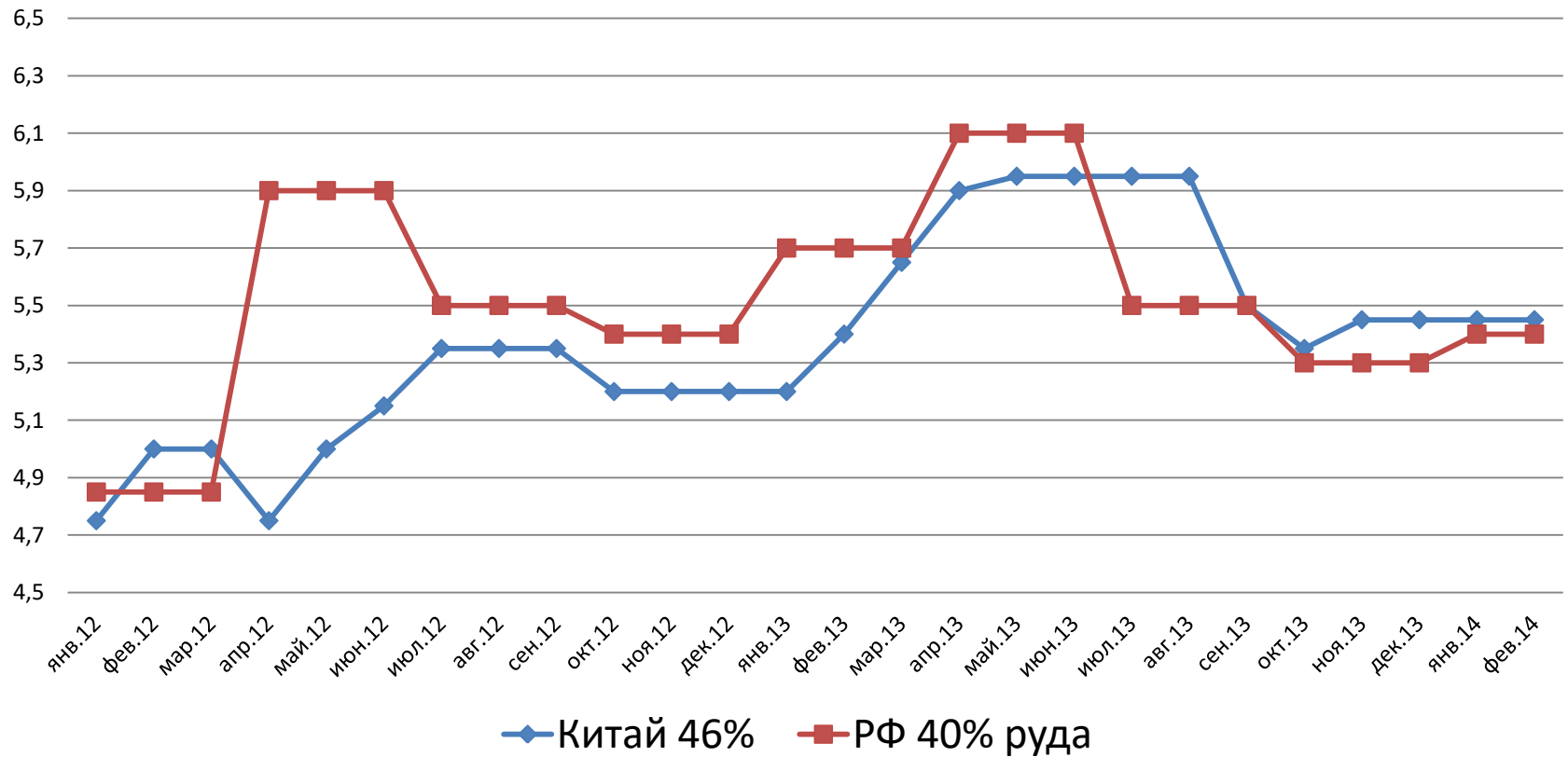


Mn ore

	Production	Volume, mt	Demand in mn ore	Zhairem capacity	Deficit
CHEMK	SiMN	150 000	320 000		
SATKA	FeMN	100 000	260 000		
Kosaya Gora	FeMN	80 000	208 000		
SGMK	SiMn	30 000	63 000		
TOTAL			851 000	475 000	376 000

Mn ore

Price of Mn ore in the world and Russia usd/dmtu



URM company on the market

URM company on the market

CIS ferroalloys market review

Competitions

CHEMK Group (4 plants)

- 550 000 FeSi
- 150 000 mt LC/MC
- 100 000 mt HC FeCr
- 120 000 mt SiMn
- 7 000 SiCa
- FeMo
- Harp deposit -600 000 CrOre(20% Cr)
- Antonovskiy deposit-kvarts

Privat Group (3 plants)

- SiMn -1200 000 mt
- FeMn-410 000 mt
- LC MN -30 000 mt
- FeSi-120 000 mt
- HC (Charge FeCr) –Tilchi
- Mn and Cr ore deposits

yildirimgroup

- 120 000 mt HC
- Voshod deposit-200 000 mt CrOre (45% Cr)

Mechel Group (Bratsk)

- 90 000 mt FeSi

SAT Company(2 plants)

- SiMn -50 000 SiMn
- Low Grade Mn ore

Others

- Georgia producers (FeSi, SiMn)
- Glencore (Vale) and Eramet (SiMn)
- Kluchi (LC FeCr)

Russian and Ukraine ferroalloys market. Conclusion

- Russian market is the one of the largest markets in terms of steel production and consumptions of ferroalloys.
- There is tough competitions on the CIS ferroalloys market, where Consumption ferroalloys is about 0,9 mio mt/year but supply is more than 1,5 mio mt per year
- Russian market are open for penetrations of world producers ferroalloys, as a result about 200 000 mt was imported from abroad or 16% of total consumption.
- Tough competition has resulted to decreasing difference between average world prices and Russian and Ukraine prices, which were always much higher world prices.
- 2014 y will be transition year from spot market to build long-term cooperation based on formula pricing for our company

	Steel production (‘000 000 mt)	Ferroalloys demand (‘000 000 mt)
China	708,7	14,1
EU	169,4	3,3
Japan	107,2	2,1
USA	88,5	1,8
Russia	69,5	0,85

Russian ferroalloys market.



Thank you for attention