
Competitive and Regulatory Dynamics of Turkish Telecommunications Industry

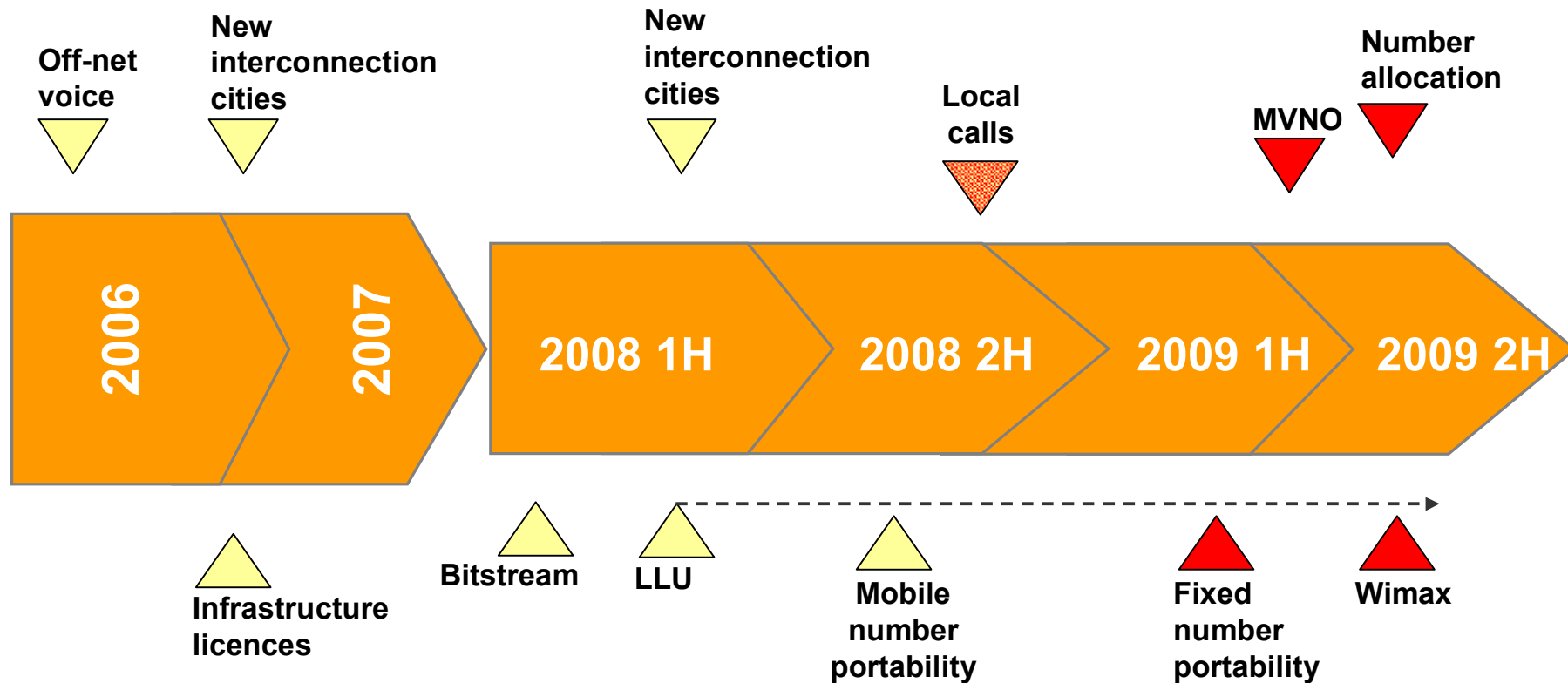
December 2, 2008

AGENDA

OPPORTUNITIES AND RISKS IN TURKISH TELECOM INDUSTRY

- Voice
- Data

OVERALL REGULATORY PROGRESS ACCELERATED IN THE LAST TWO YEARS

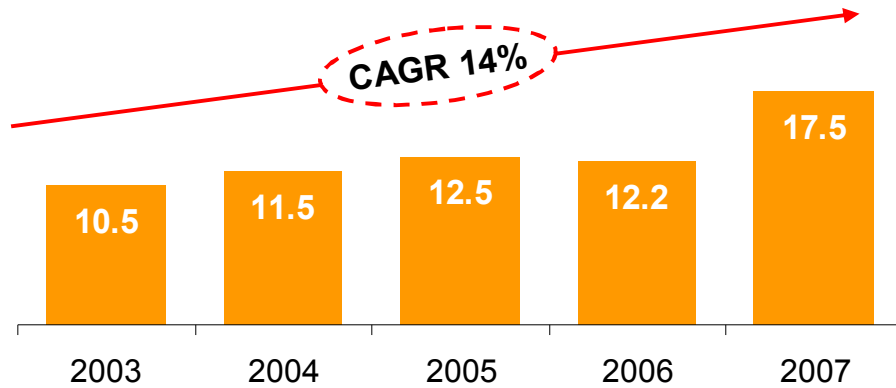


 Realised

 Expected

TELECOMMUNICATIONS SECTOR GREW BY 14% ON AVERAGE OVER THE LAST 5 YEARS

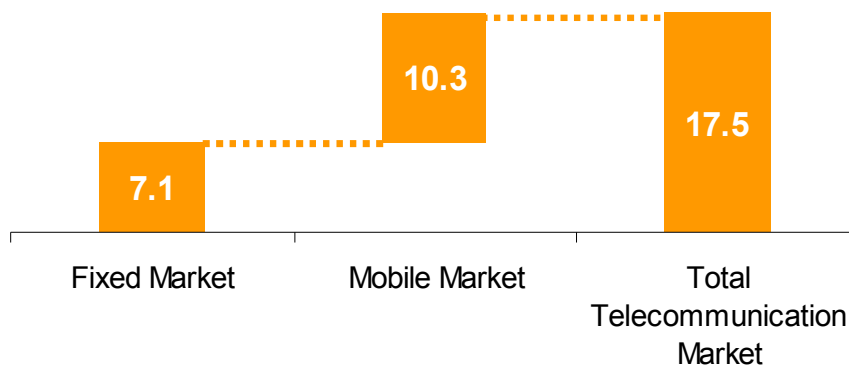
Total telecommunications sector in Turkey (US\$ bn)



Source: Turkish Telecommunications Authority

- Sector size : US\$17.5 bn
 - 59% Mobile
 - 41% Fixed

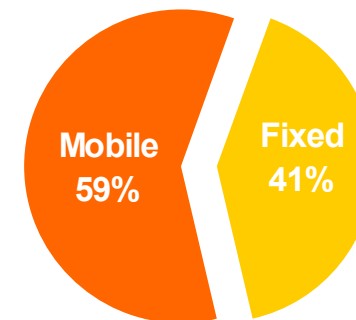
Sector breakdown @ 2007 (US\$ bn)



Source: The Company & Market Research

* 2007 value is projected based on the figures of the first 9 months

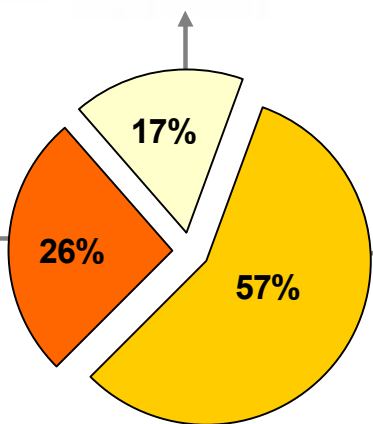
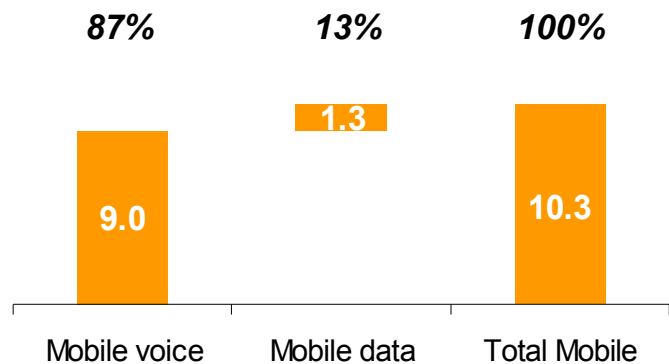
Mobile & fixed market, 2007



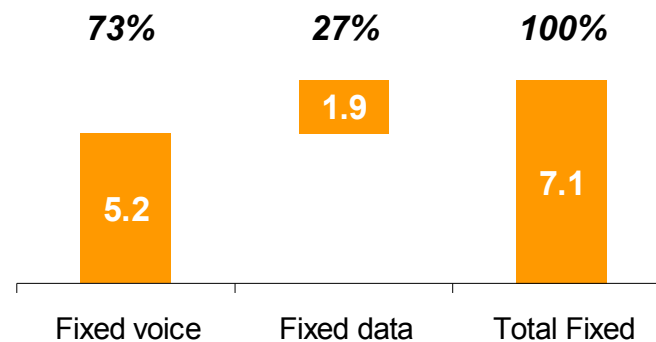
Source: The Company & Market Research

HOWEVER, SHARE OF ALTNETS IS STILL LOW AT AROUND 7% ...

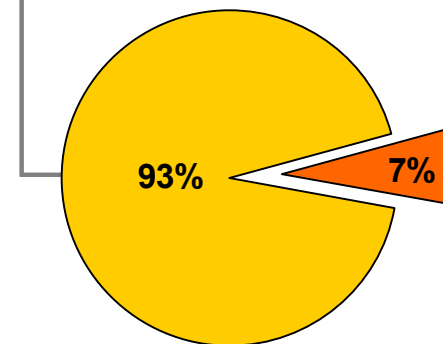
Mobile market @ 2007 (US\$ bn)



Fixed market @ 2007 (US\$ bn)

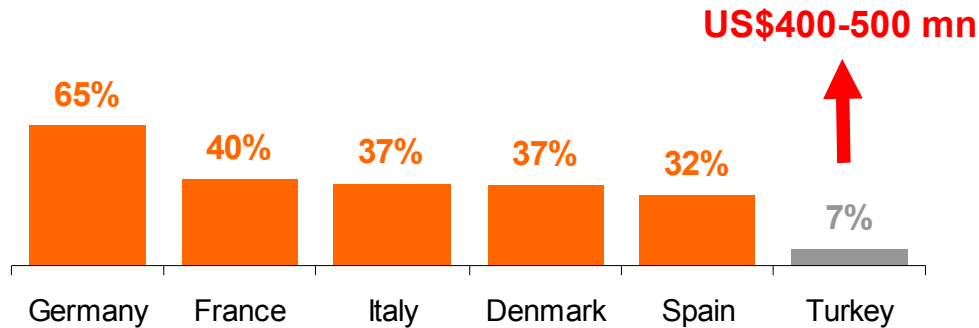


33 alternative operators



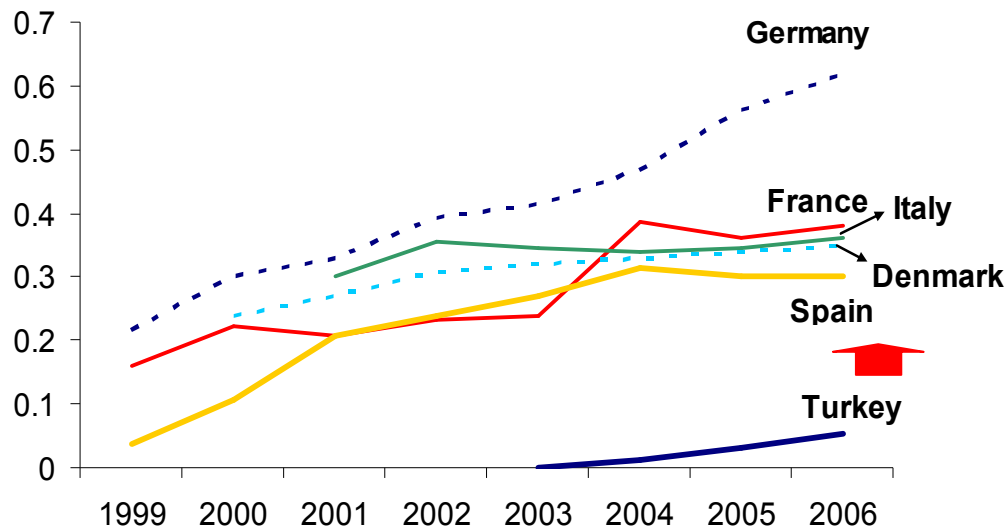
... AND NOT GROWING FAST.

Market share of alternative operators @ fixed market (%)



- Alternative operators market share...
 - is only 7%.
 - lags behind the other European countries.
 - thus, has huge growth potential.

Market share of alternative operators @ fixed market (%)



- Only full liberalisation is awaited.
- With full liberalisation **by 2012**, alternative operators' expected...
 - market share is **20%**.
 - market size is ~ **US\$1,400 mn**.

TURK TELEKOM IS STILL THE MOST PROFITABLE OPERATOR IN THE WORLD

Company name	Return on revenue	Revenue rank in 2008
Turk Telekom	53,7%	65
Orascom Telecom	43,9%	69
Reliance Communications	35,6%	70
Saudi Telecom Company	34,9%	35
Etisalat	34,2%	61
IAM	29,2%	75
Windstream	28,1%	77
SFR Vivendi	27,9%	24
MIC/Tigo	27,0%	85
Sing Tel	26,7%	32
Telmex	25,6%	26
Telecom Egypt	25,4%	98
SES	25,2%	87
MTS	25,1%	44
BhartiAirtel	24,8%	57
Chunghwa Telecom	24,6%	59
PLDT	24,6%	76
China Mobile	24,4%	8
MegaFon	24,2%	63
BCE	22,0%	19
Turkcell	21,3%	55
KPN	21,2%	18
Qwest Communications	21,2%	22
TeliaSonera	21,1%	21
BSNL	21,0%	39
Telenor	20,8%	20
Zain	20,4%	60
PT Telekomunikasi Indonesia	20,1%	56
Vodafone	19,0%	7
America Movil	18,8%	13

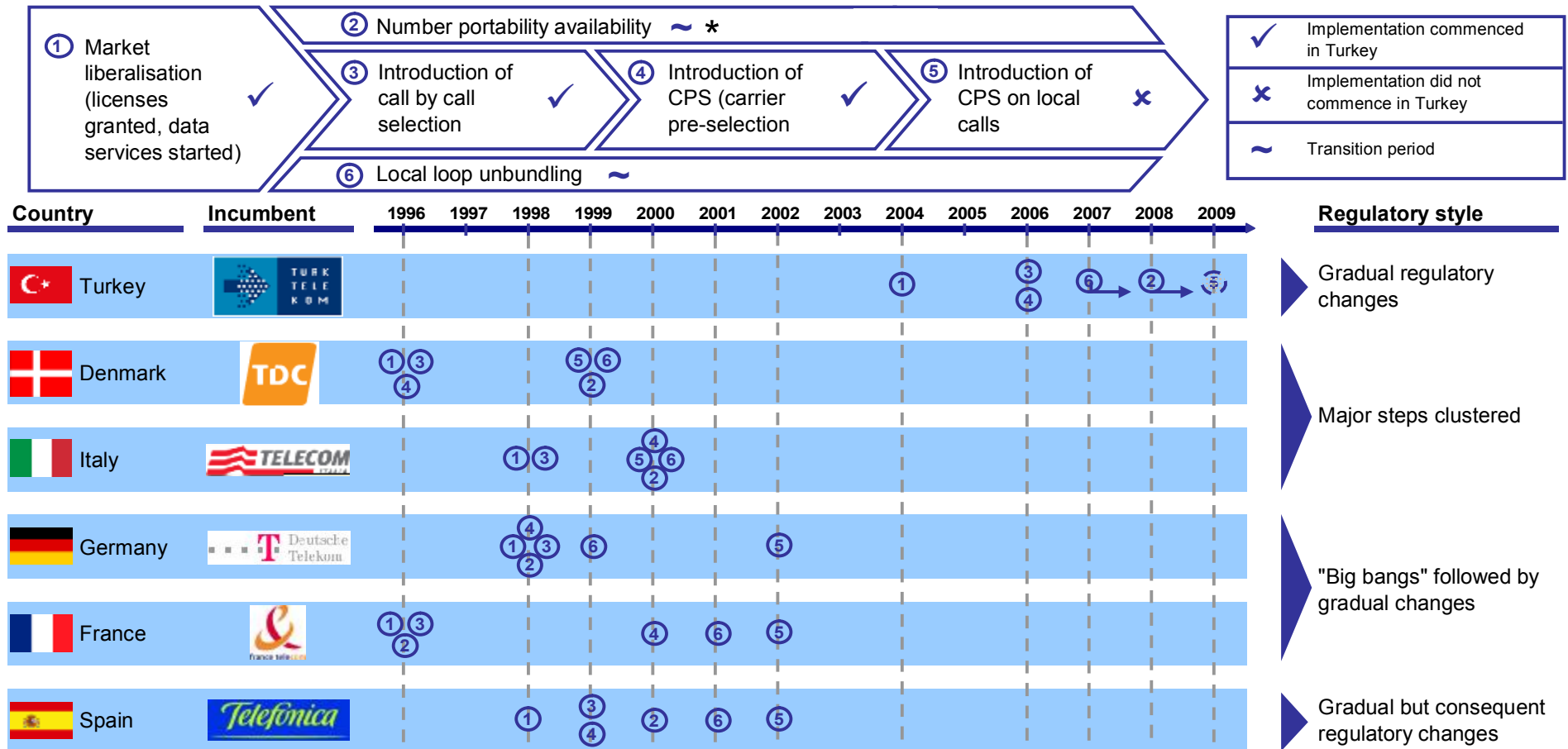
Company name	Return on revenue	Revenue rank in 2008
Swisscom	18,7%	34
Telecom NZ	17,2%	72
MTN	16,3%	28
Belgacom	15,8%	42
Telefonica	15,8%	5
CenturyTel	15,7%	84
Svyazinvest	15,1%	31
Telkom SA	14,5%	53
China Netcom	14,4%	27
Telekom Malaysia	14,3%	64
Elisa Corporation	14,0%	88
Shaw	14,0%	82
Telus	13,9%	37
SK Telecom	13,7%	25
Telstra	13,6%	16
Oi/Telemar	13,4%	33
China Telekom	13,3%	15
Iliad	12,4%	99
CANTV	12,3%	73
France Telecom	12,2%	6
Portugal Telecom	12,1%	41
TOT	11,5%	95
Bezeq	11,0%	78
Embarq	10,7%	54
Bouygues Telecom	10,4%	51
OTE	10,1%	36
AT&T	10,1%	1
Telekom Austria	10,0%	49
Frontier	9,4%	89
China Unicom	9,3%	23
MTS Allstream	8,9%	97
Telecom Argentina	8,6%	80
BT	8,4%	11
Telecom Italia	7,9%	9

AGENDA

OPPORTUNITIES AND RISKS IN TURKISH TELECOM INDUSTRY

- Voice
- Data

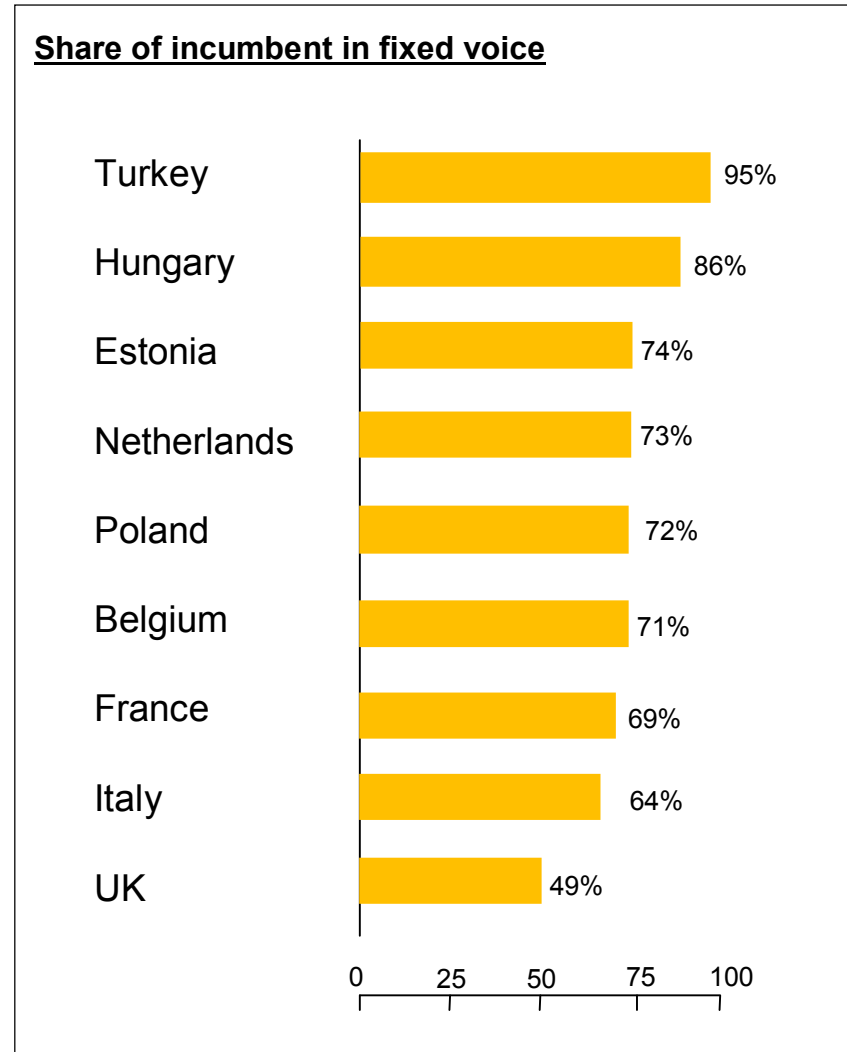
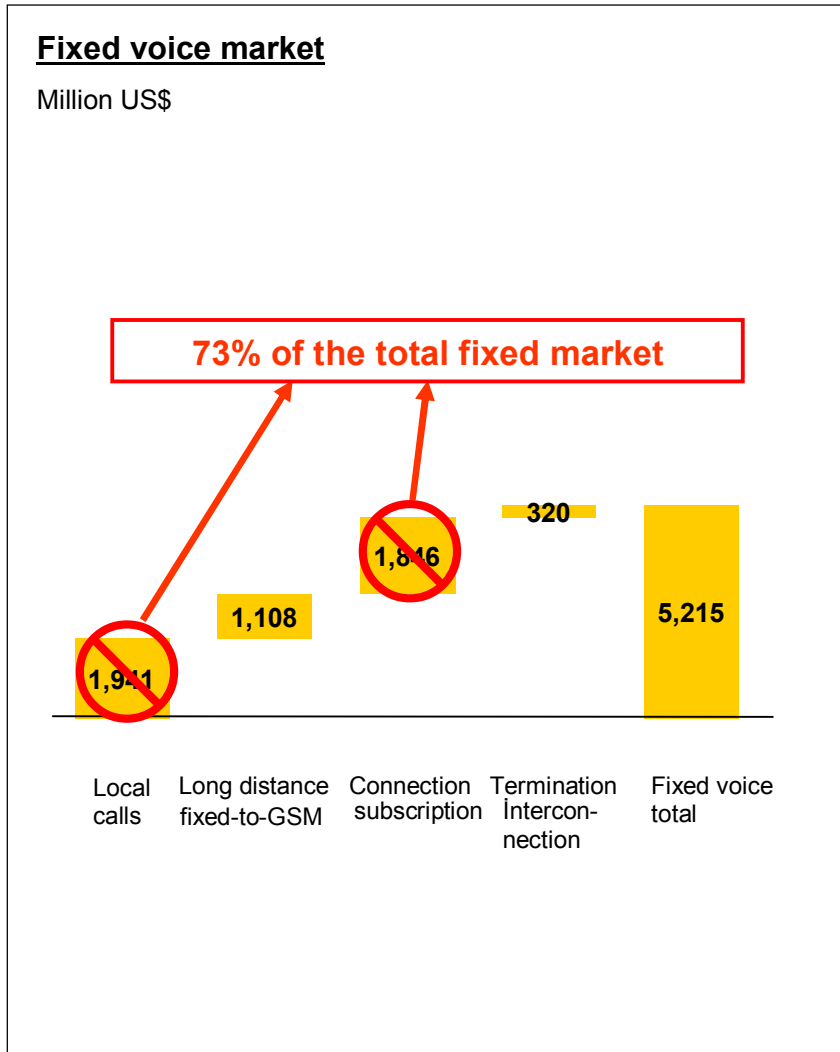
LIBERALISATION OF FIXED VOICE MARKET WAS SLOW AND GRADUAL



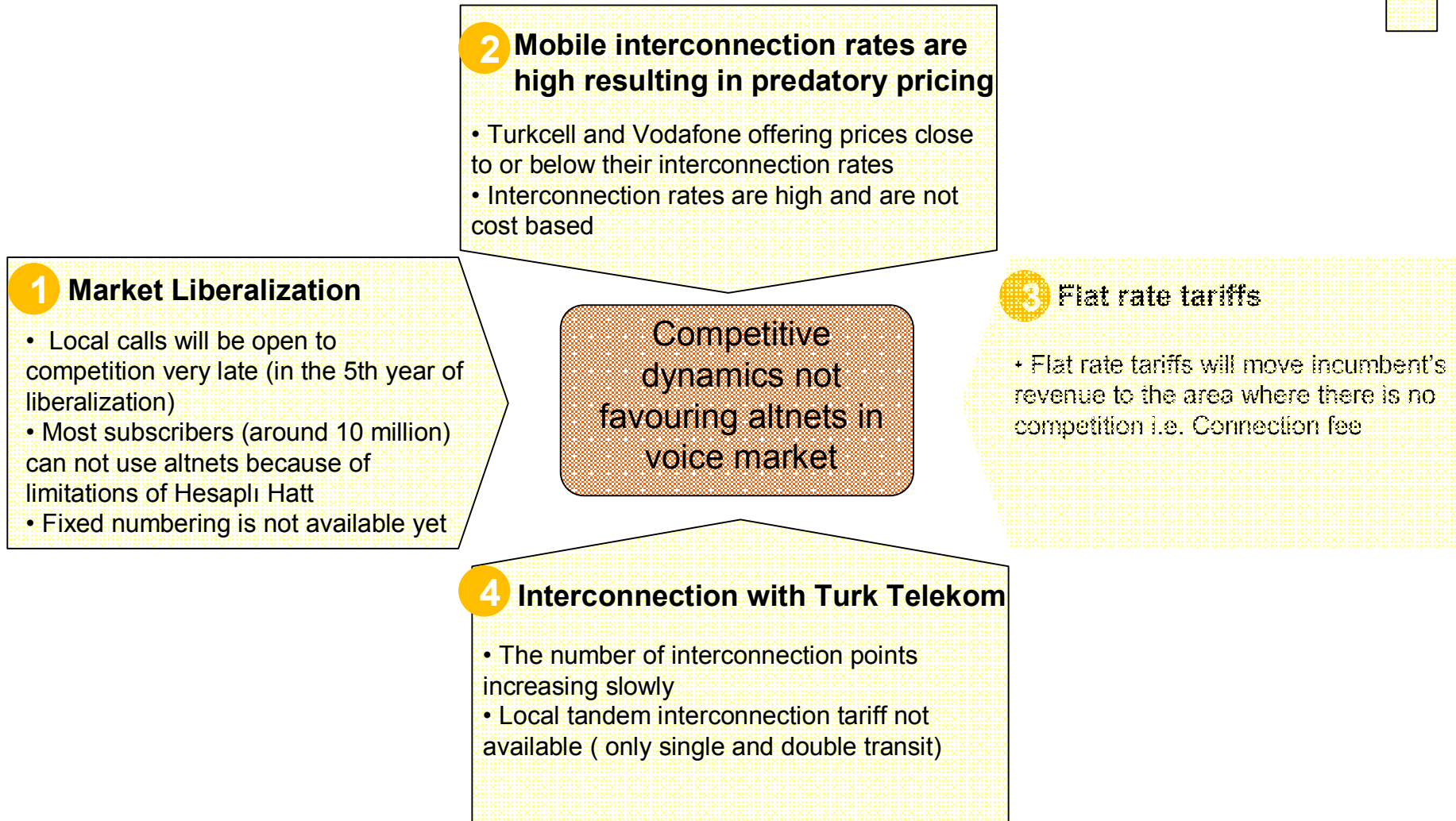
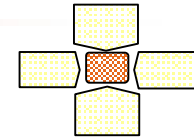
Source: The Company, Hoovers, McKinsey

* Mobile number portability is started in November 2008, while number portability in fixed market is expected within 1H2009.

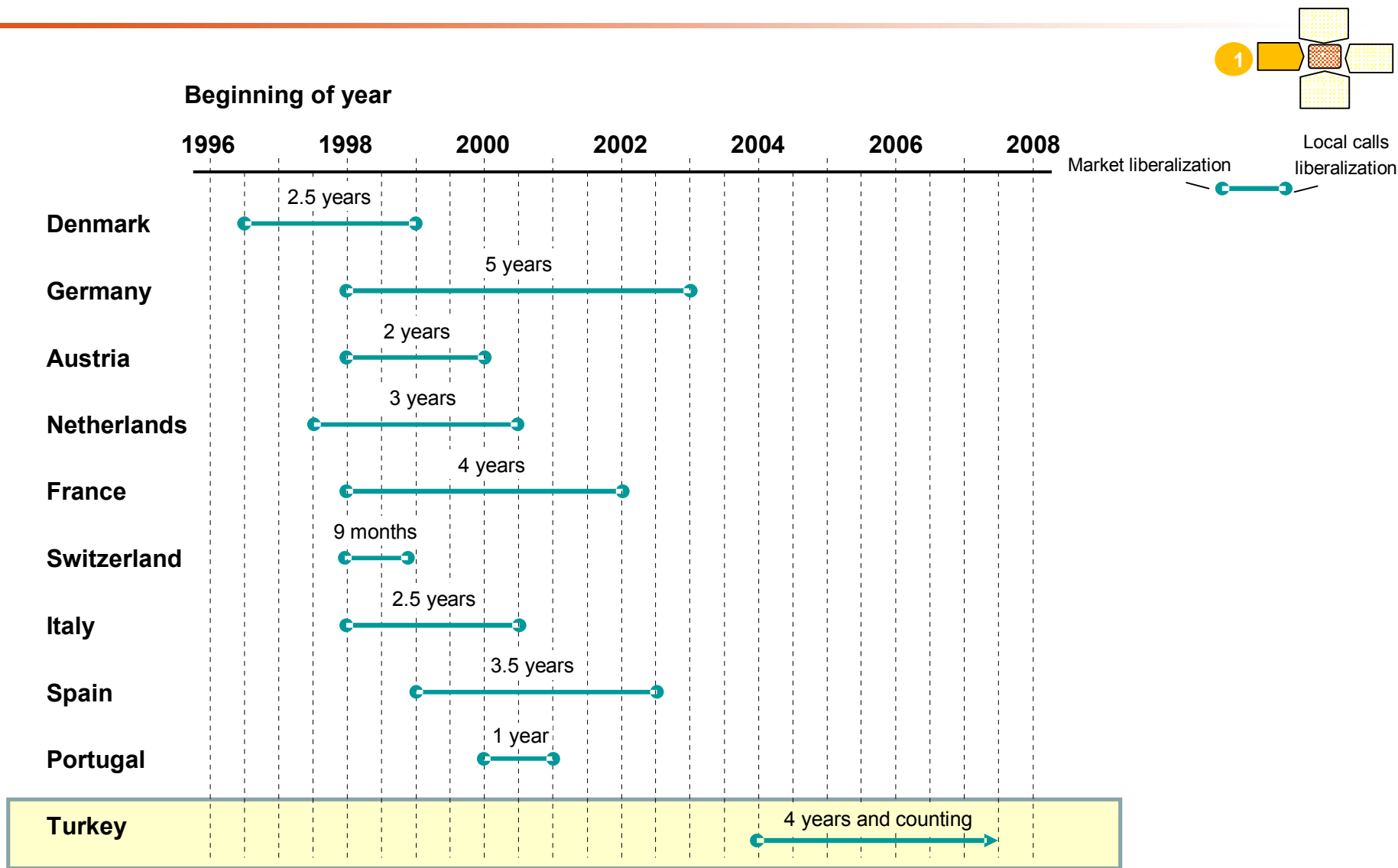
ALTNETS WERE ONLY ABLE TO CAPTURE 5% MARKET SHARE OF \$5.2 BILLION FIXED VOICE MARKET



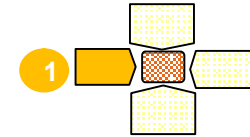
COMPETITIVE DYNAMICS NOT FAVOURING ALTNETS IN VOICE MARKET



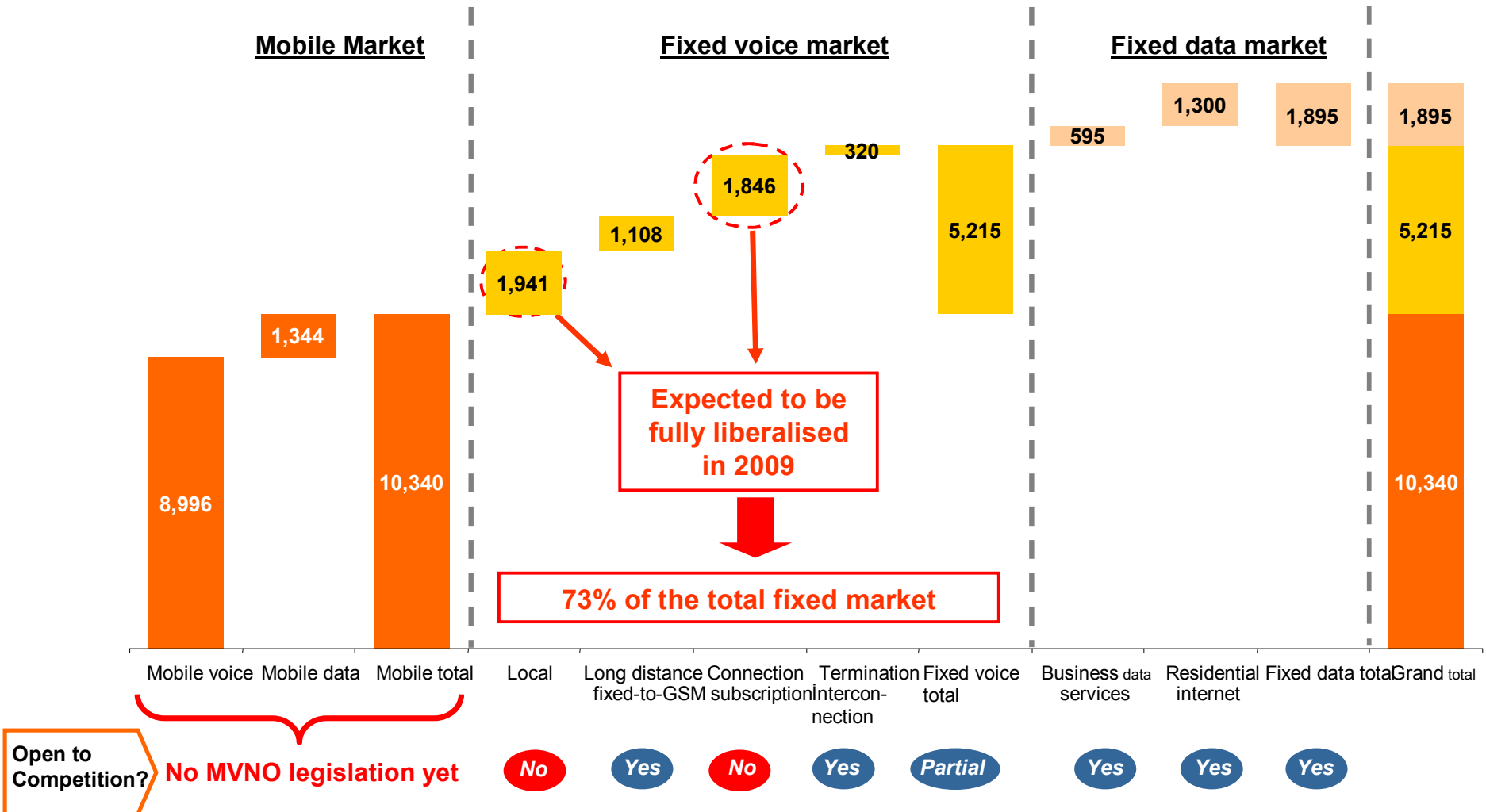
1 LOCAL CALLS LIBERALIZATION IN TURKEY IS ONE OF THE SLOWEST IMPLEMENTATIONS IN EUROPE AND ...



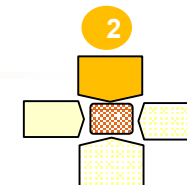
1 ...YET EXPECTED TO BE LIBERALISED IN 2009



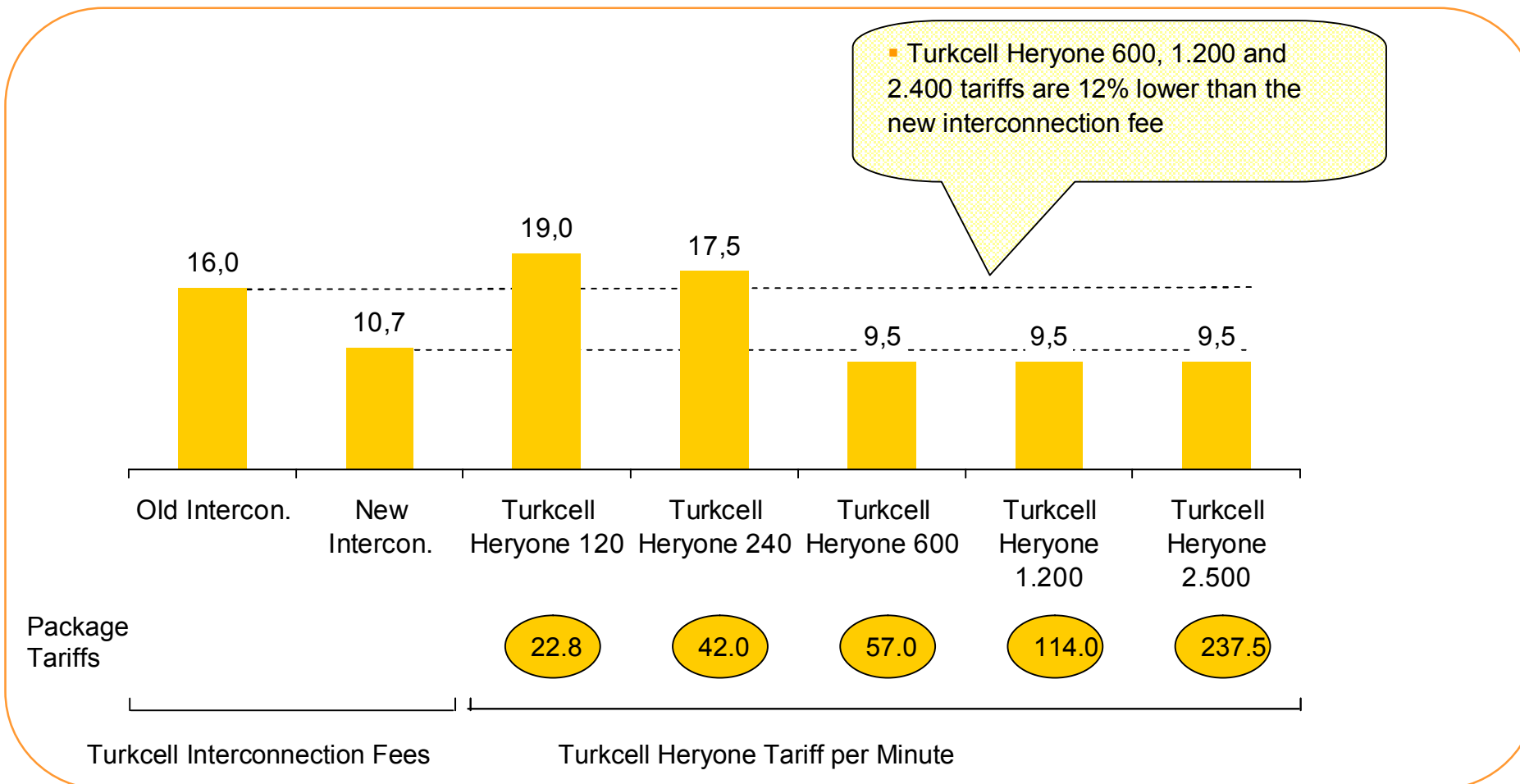
Turkish telecom market, 2007 (US\$ mn)



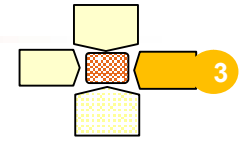
2 MOBILE OPERATORS OFFER END USER PRICES CLOSE TO OR BELOW INTERCONNECTION RATES



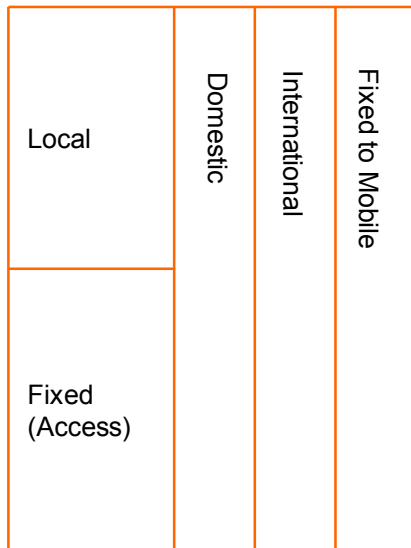
Turkcell Tariffs (TRY - incl. VAT, excl. SCT)



3 TÜRK TELEKOM MOVES ITS REVENUE FROM LIBERALIZED AREAS TO NON-LIBERALIZED AREAS BY MODIFYING TARIFFS

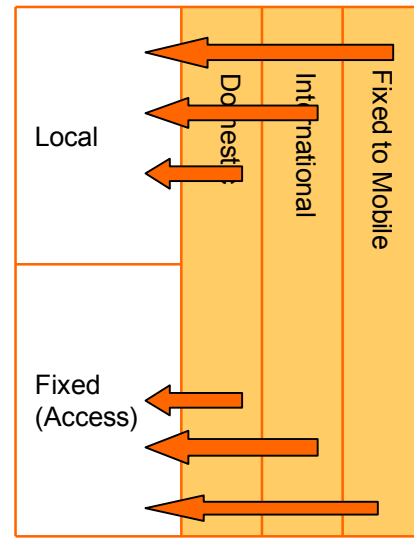


1 Before Liberalization



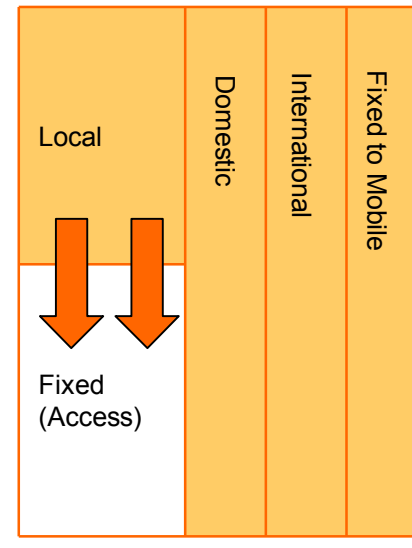
•Before liberalization Türk Telekom and other global incumbents offered higher prices for long distance and fixed to mobile calls, but lower prices for local call and fixed(access) market

2 After Long Distance Call market is liberalized



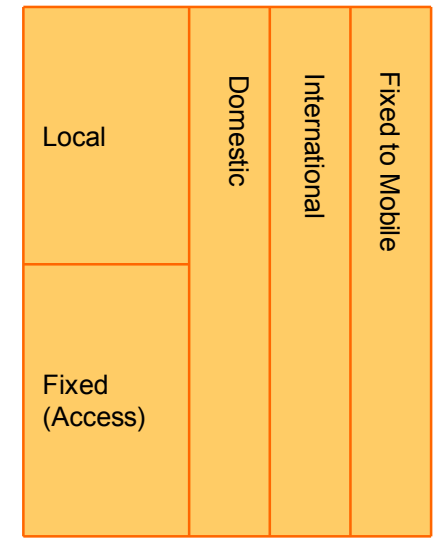
•After long distance market is liberalized, Türk Telekom reduced long distance call prices by 80%, followed by additional 50% reduction and increased local call and fixed (access) prices which are not liberalized yet

3 Long Distance and Local Call market is liberalized



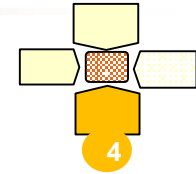
•After STH, Türk Telekom will dislocate its revenue to local calls
•Türk Telekom is expected to offer ' Flat Rate' Tariff

4 All market is liberalized



•After LLU is enforced, fixed(access) market will be liberalized
•When market becomes fairly competitive, Türk Telekom will have a globally standart profitability rate and a market share

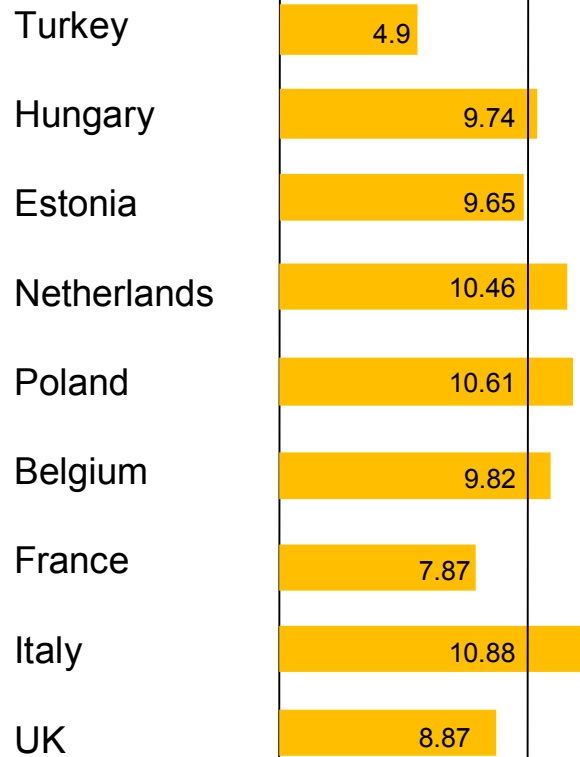
4 MOBILE INTERCONNECTION RATES ARE STILL HIGH WHEN COMPARED TO END USER PRICES



Interconnection rate

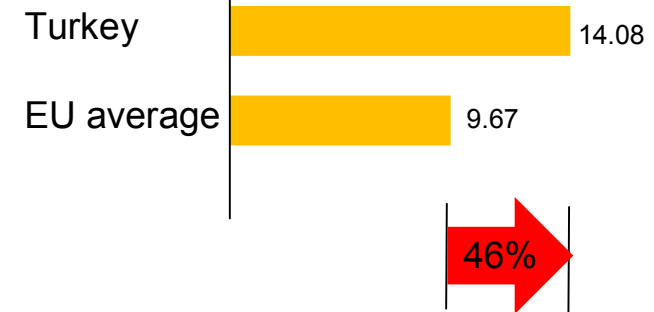
Euro cents

EU average
9.67



Interconnection rate adjusted with the price of medium basket

Euro cents



(*)Source : EU commission progress report / Medium basket : 65 calls + 50 SMS; EU price 23 Euros, TR price 8 Euros (average 2.5 min call @ 10 Ykr /min)

KEY RECOMMENDATIONS ABOUT VOICE

Market liberalization

- Local calls need to be opened to competition. Operators should be able to start offering local call service with their existing long distance interconnection agreements
- Fixed numbering and fixed number portability should be executed as scheduled in May 2009
- Social tariff should be redefined and HesaplıHatt users should be given access to altnets
- MVNO licensing should be made in 2009

Interconnection rates

- Interconnection rates –especially mobile - should be cost based and decreased to comparable EU levels.

Flat rate tariffs

- Flat rate tariff should be closely monitored and made available to alternative operators who pay interconnection by minutes.
- Wholesale line rental should be made available.

Interconnection with Turk Telekom

- The number of interconnection cities should increase
- Local interconnection, single transit and double transit should be made available.

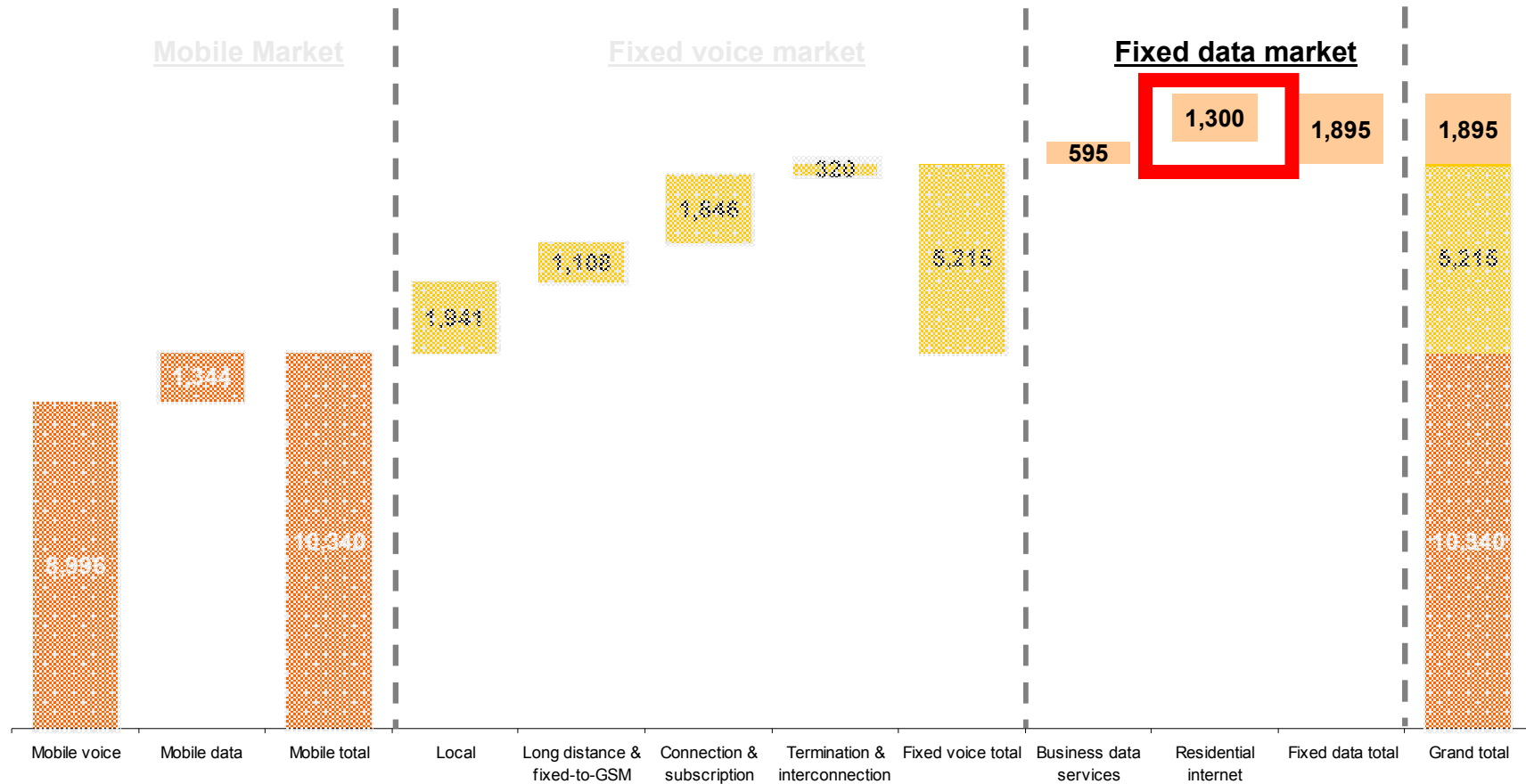
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OPPORTUNITIES AND RISKS IN TURKISH TELECOM INDUSTRY

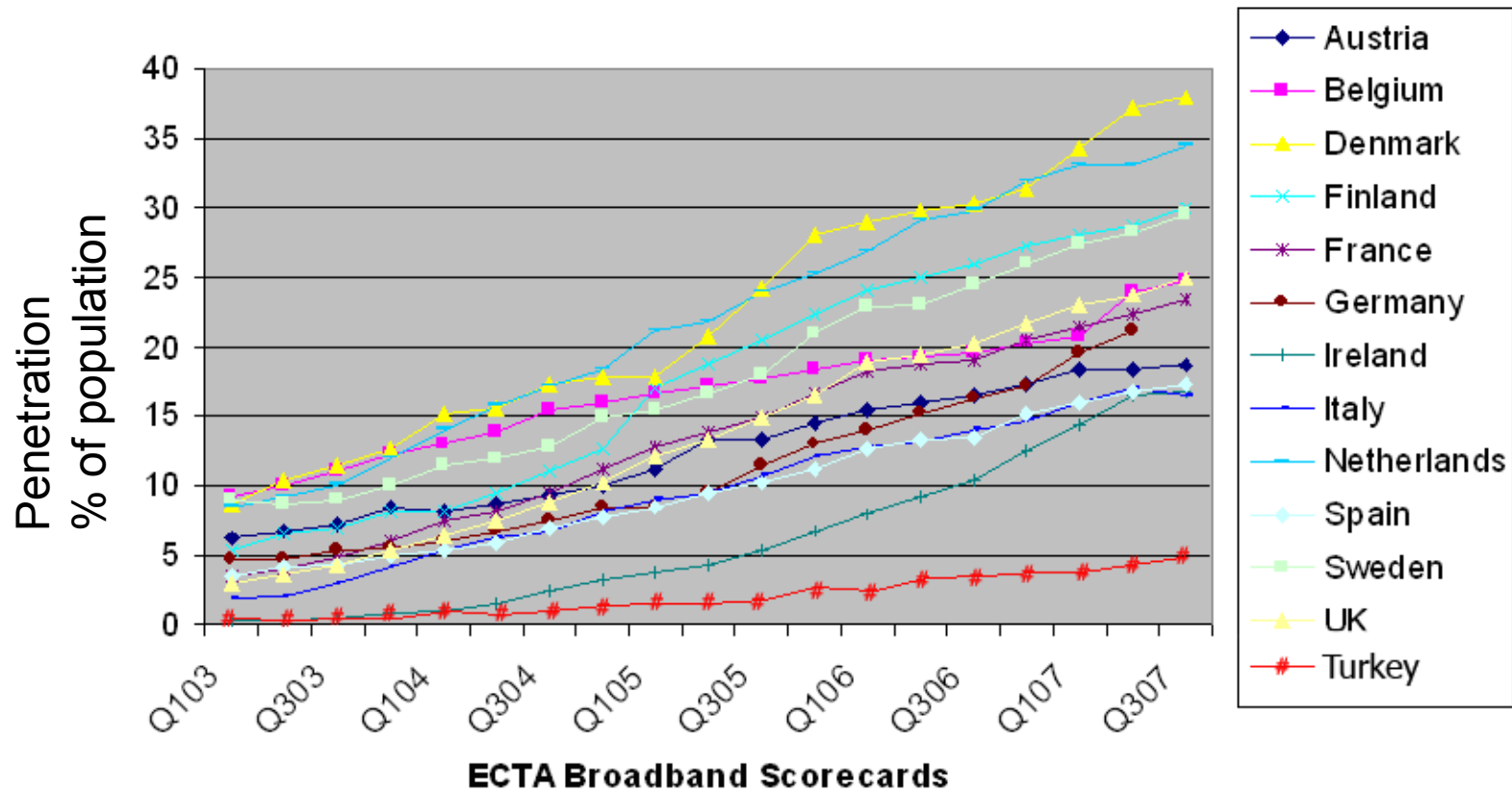
- Voice
- Data

AN IMPORTANT PORTION OF DATA IS RESIDENTIAL BROADBAND THROUGH ADSL

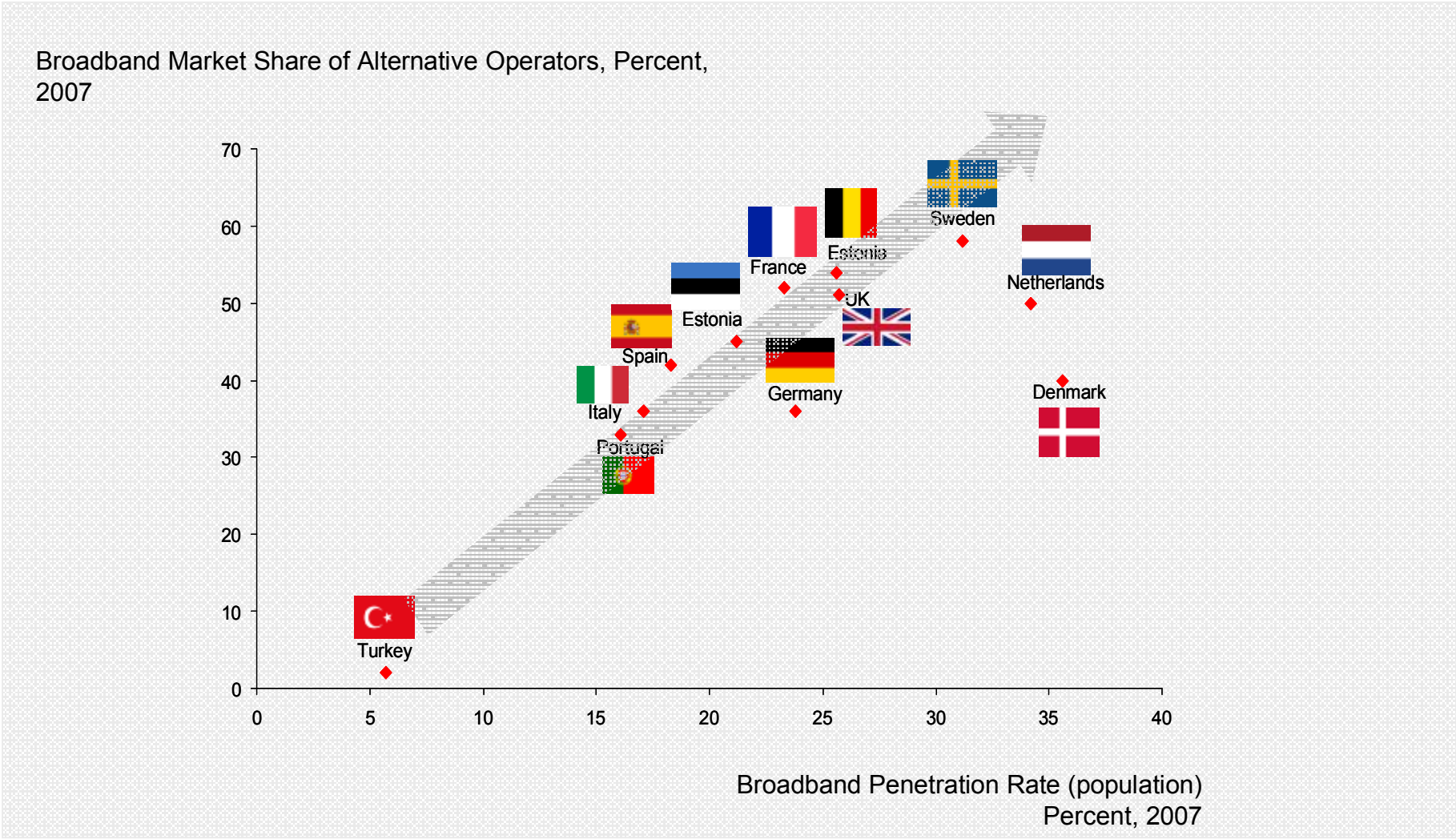
Turkish Telecom Market, 2007 (US\$ mn)



HOWEVER, BROADBAND PENETRATION IS STILL LOWEST AMONG EU COUNTRIES



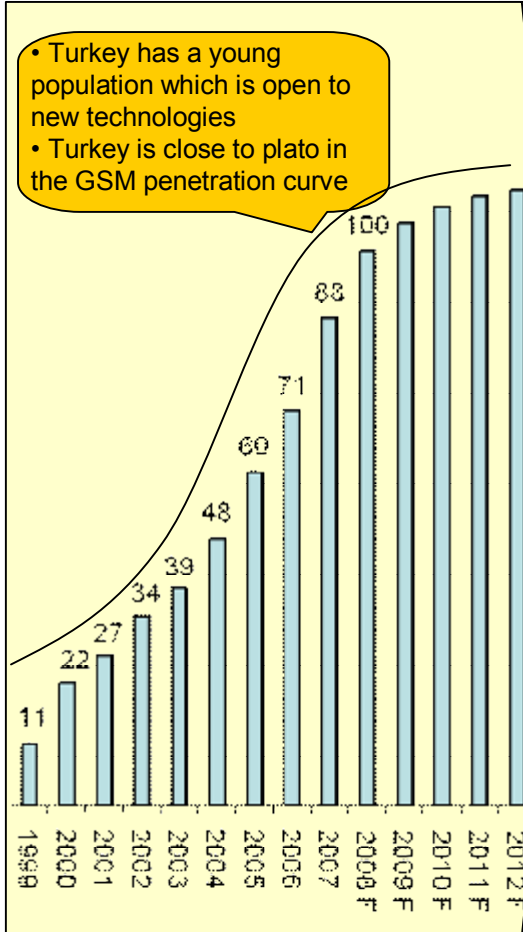
THERE IS A STRONG CORRELATION BETWEEN SHARE OF ALTNETS AND PENETRATION RATE



INCREASING COMPUTER PENETRATION WILL HELP FUEL ADSL GROWTH

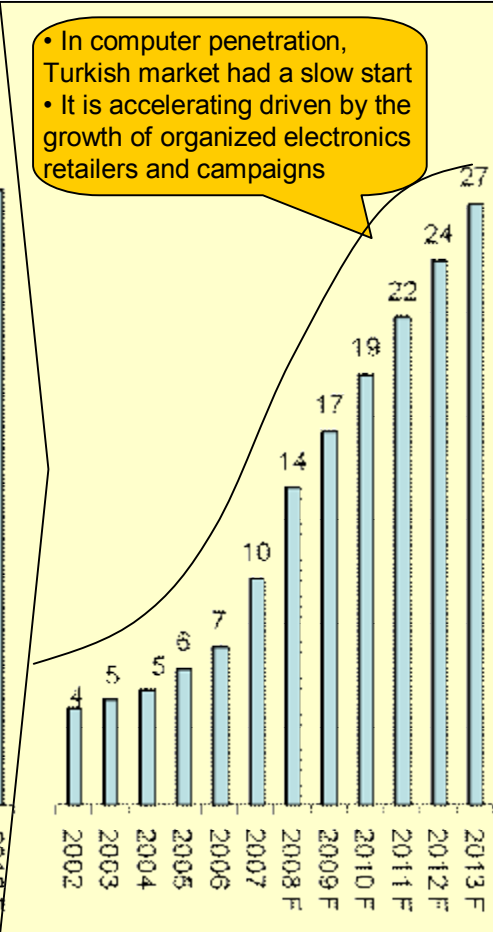
Mobile Penetration Rate, Percent

- Turkey has a young population which is open to new technologies
- Turkey is close to plateau in the GSM penetration curve



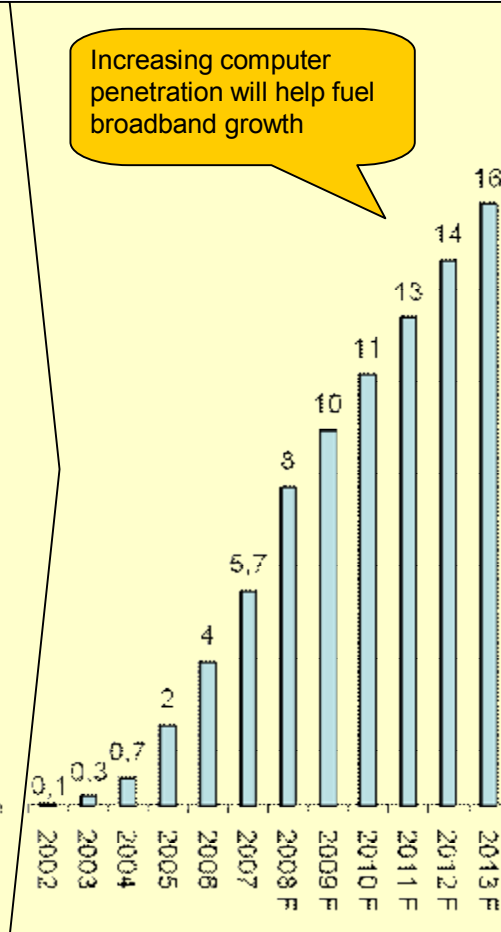
Computer Penetration Rate, Percent

- In computer penetration, Turkish market had a slow start
- It is accelerating driven by the growth of organized electronics retailers and campaigns



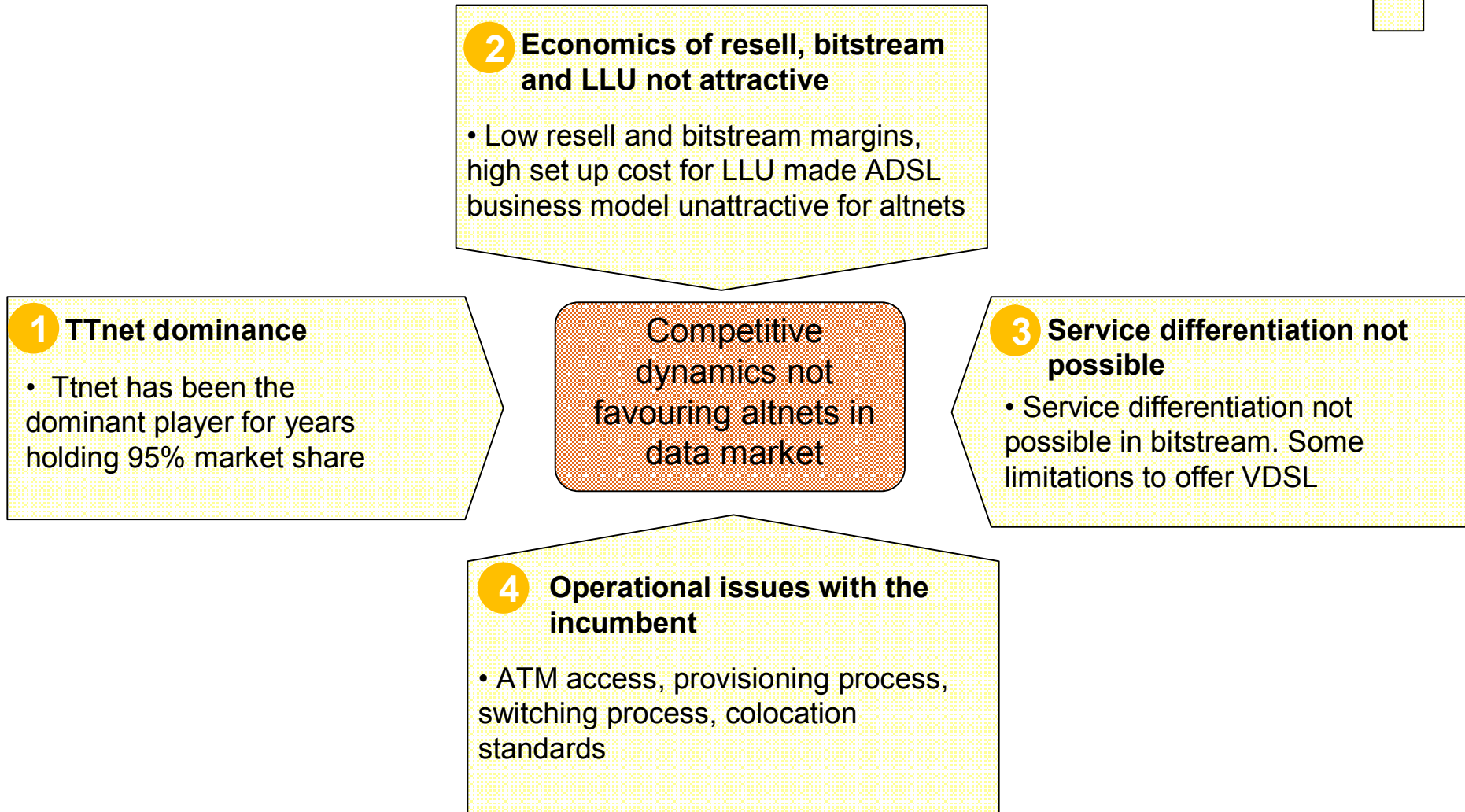
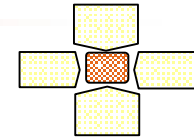
Broadband Penetration Rate, Percent

- Increasing computer penetration will help fuel broadband growth

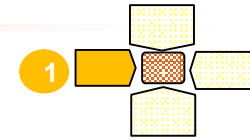


- As evidenced by the rapid growth in GSM penetration rate, young Turkish consumers are open to adoption of new technologies
- Up to now, mostly the existing computer owners purchased broadband internet service
- Going forward, new computer purchases will lead to increased broadband penetration rate

COMPETITIVE DYNAMICS NOT FAVOURING ALTNETS IN DATA MARKET



1 TTNET HAS BEEN THE DOMINANT PLAYER FOR YEARS HOLDING 95% MARKET SHARE



Operator	Number of Subscribers (Feb. 08)	Market Share
TTNet (ADSL)	4.599.410	%94,8
Türksat (cable internet)	41.109	%0,84
Alternative operators (ADSL)	211.816	%4,36

- TTNET not announced as dominant market player
- TTNET applying for voice and infrastructure licenses

KEY RECOMMENDATIONS ABOUT DATA

- TTNET needs to be announced as Significant Market Power (SMP)
- Cost of LLU and bitstream margins should be improved. The number of LLU available exchanges should increase. Cost based pricing is a must
- Operational issues should be resolved fast
- Naked ADSL should be made available
- Colocation and facilities sharing prices should be cost based
- Fiber access to colocation points should be made available
- Change of ADSL operator. Currently, the incumbent operator requires prior cancellation of service with the customer's existing provider (95% TTNET). Customers can experience days or even weeks of service interruption as they first cancel their existing service and only then subscribe to a competing service. Rules and regulations need to be amended or introduced to allow for a seamless change of operator process with minimal service interruption and bureaucracy.