Interim Study Report 3

Monitoring electronic communications and information society services in Enlargement Countries

March 2010

Key highlights

Outline

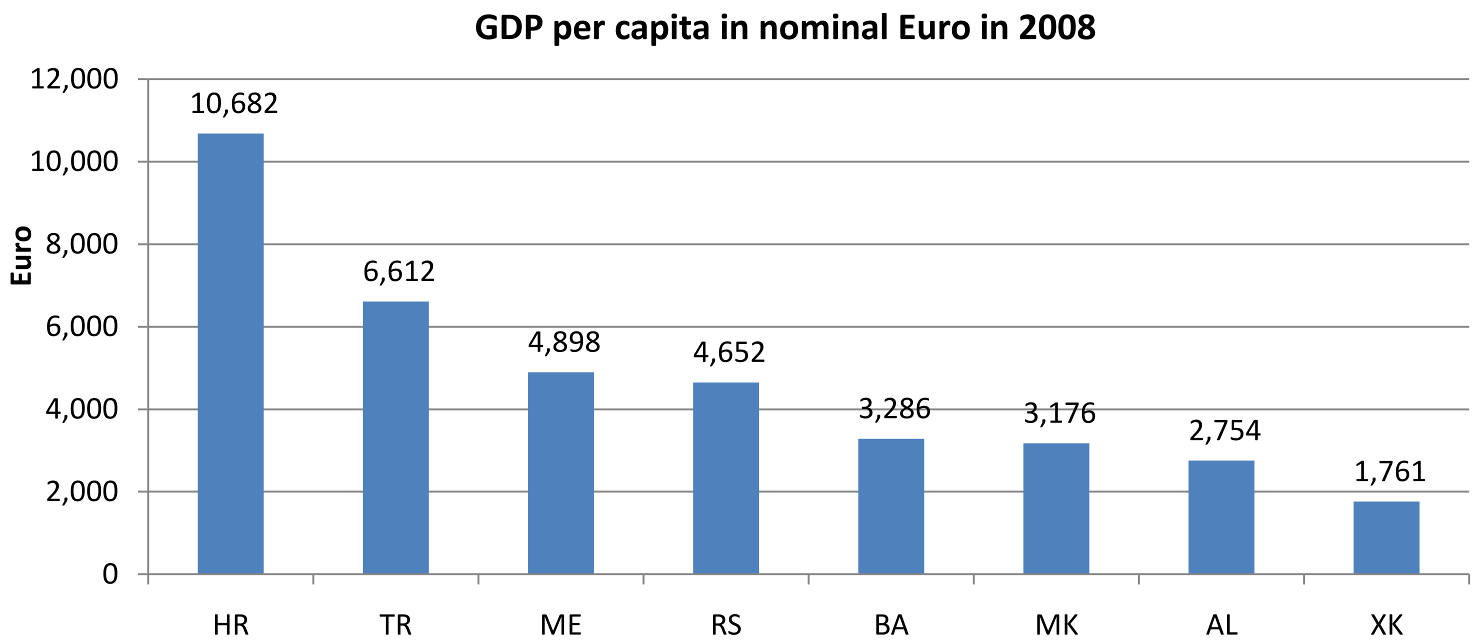
- Market overview
- Legislative and regulatory environment
- State ownership of the incumbent operators
- Implementation of the EU framework
- Market analyses
- Competitive safeguards
- Wholesale tariffs

Monitored countries

Market overview

- General economic situation
- Electronic communications sector
- Fixed telephony
- Mobile telephony
- Internet and broadband

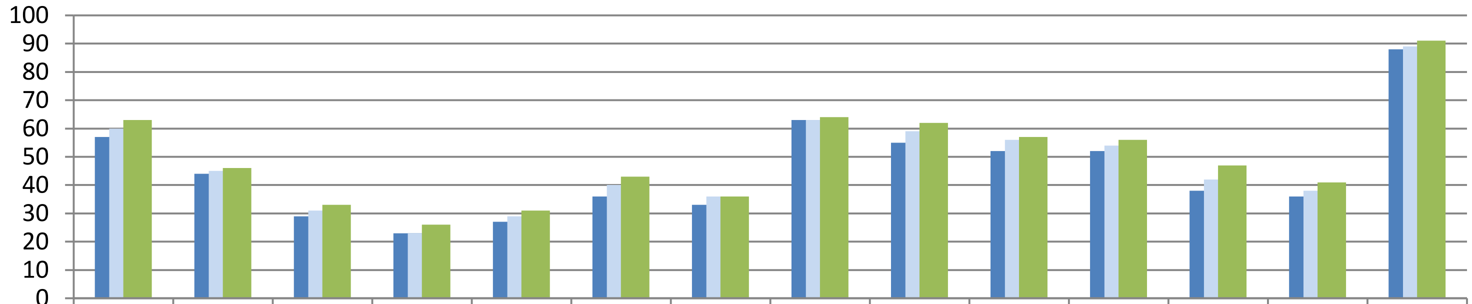
General economic situation (1/3)



- Croatia had the highest GDP per capita at around 43% of the EU-27 average
- Turkey came next with about 30% of the EU-27
- Montenegro and Serbia around 20% of the EU-27

General economic situation (2/3)

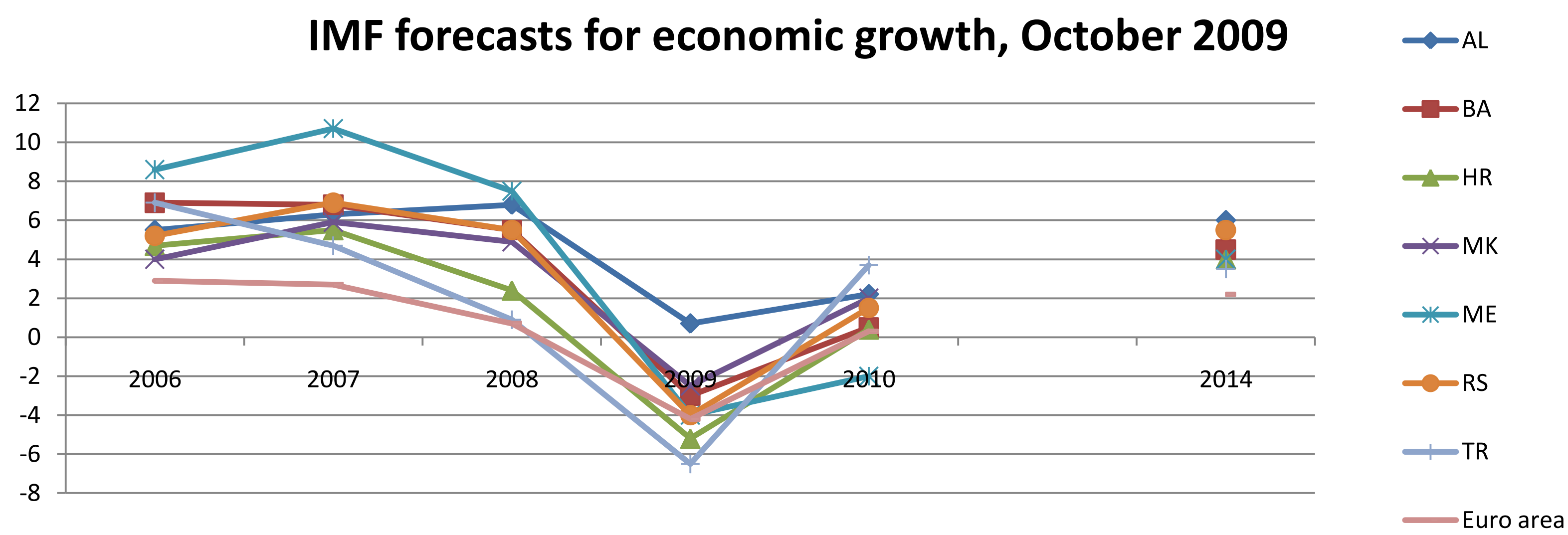
Volume index of GDP per capita in PPPs (EU 27=100)



	HR	TR	MK	AL	BA	ME	RS	HU	LT	LV	PL	RO	BG	SI
2006	57	44	29	23	27	36	33	63	55	52	52	38	36	88
2007	60	45	31	23	29	40	36	63	59	56	54	42	38	89
2008	63	46	33	26	31	43	36	64	62	57	56	47	41	91

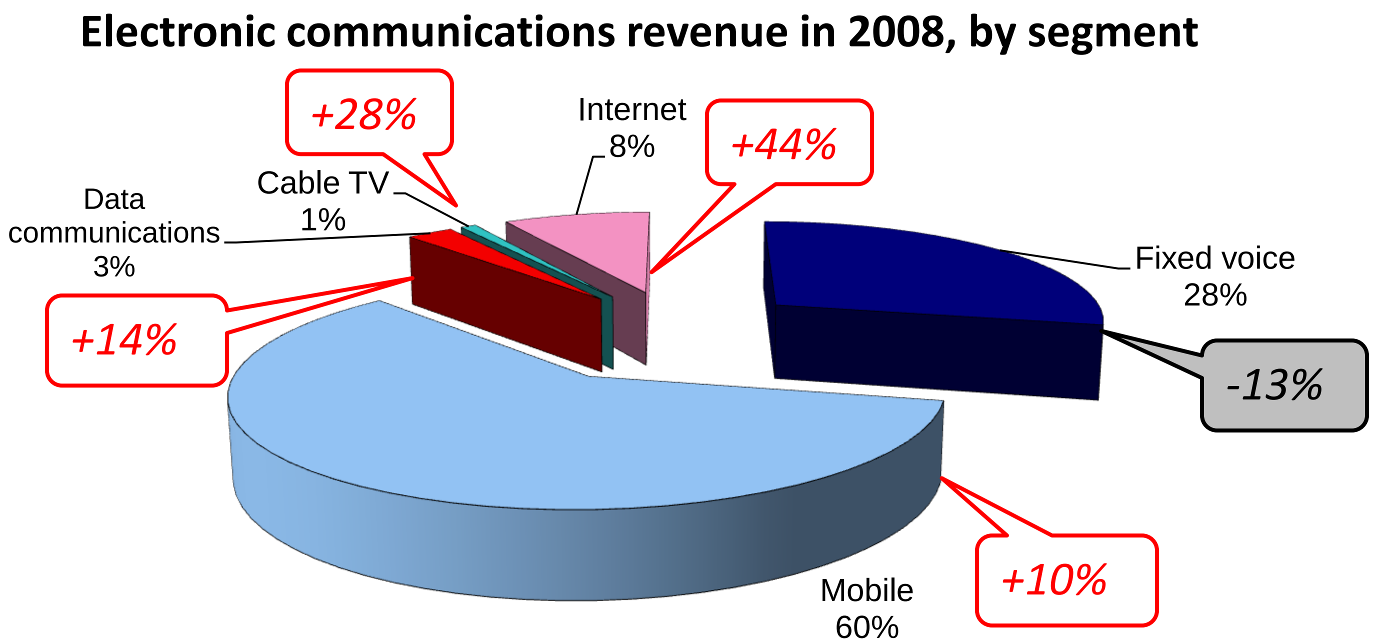
- Croatia had GDP per capita similar to Hungary or Lithuania, above Latvia, Poland, Romania and Bulgaria
- All three EU candidate countries are below the EU-27
- Remaining countries are below any of the EU-27, except for Montenegro that comes just above Bulgaria

General economic situation (3/3)



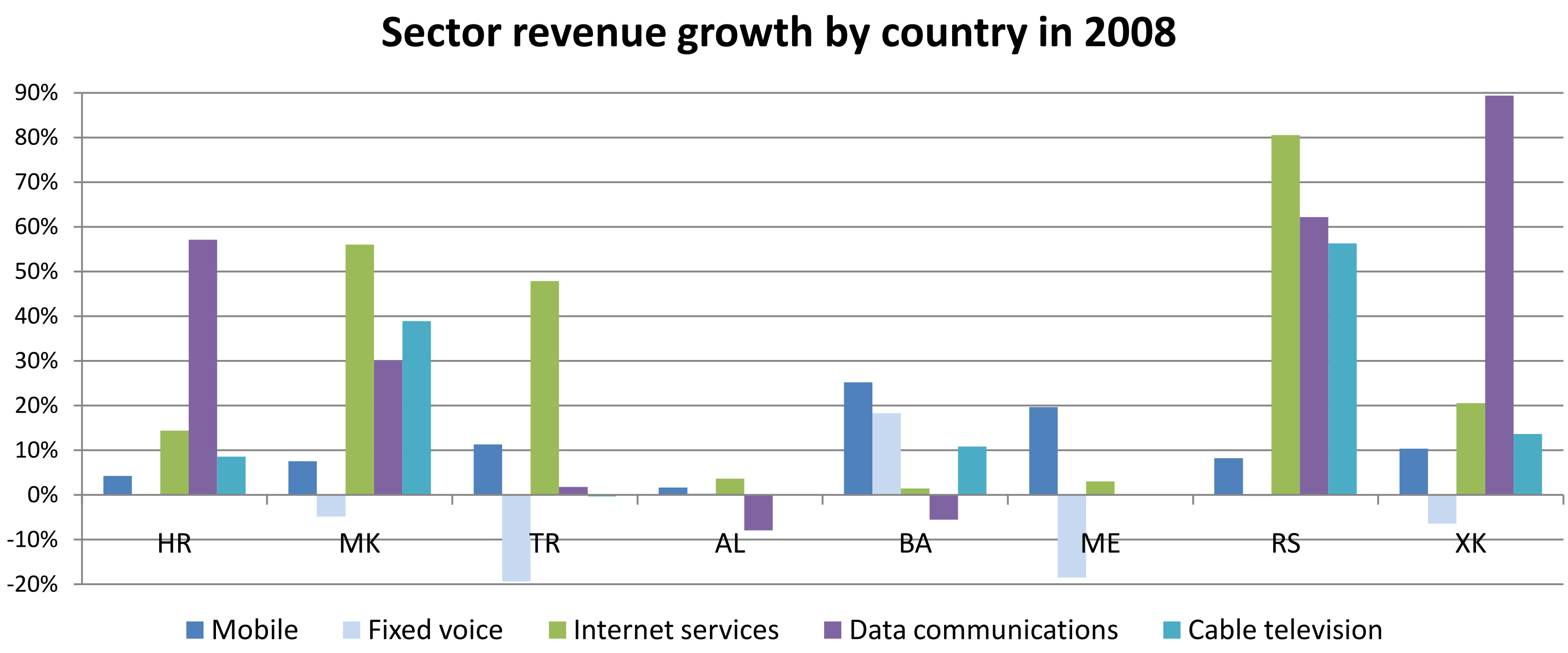
- Slowdown became noticeable in Q4 2008
- Forecasts continuously revised downwards
- Shrinking GDP in 2009 for the whole region by at least 2.5%, except Albania and Kosovo (not included in forecasts but may grow by 3%)
- Turkey worst hit in 2009 by -6.5%, followed by Croatia with -5.2%
- Recovery over at least 3 to 4 years

Electronic communications sector (1/3)



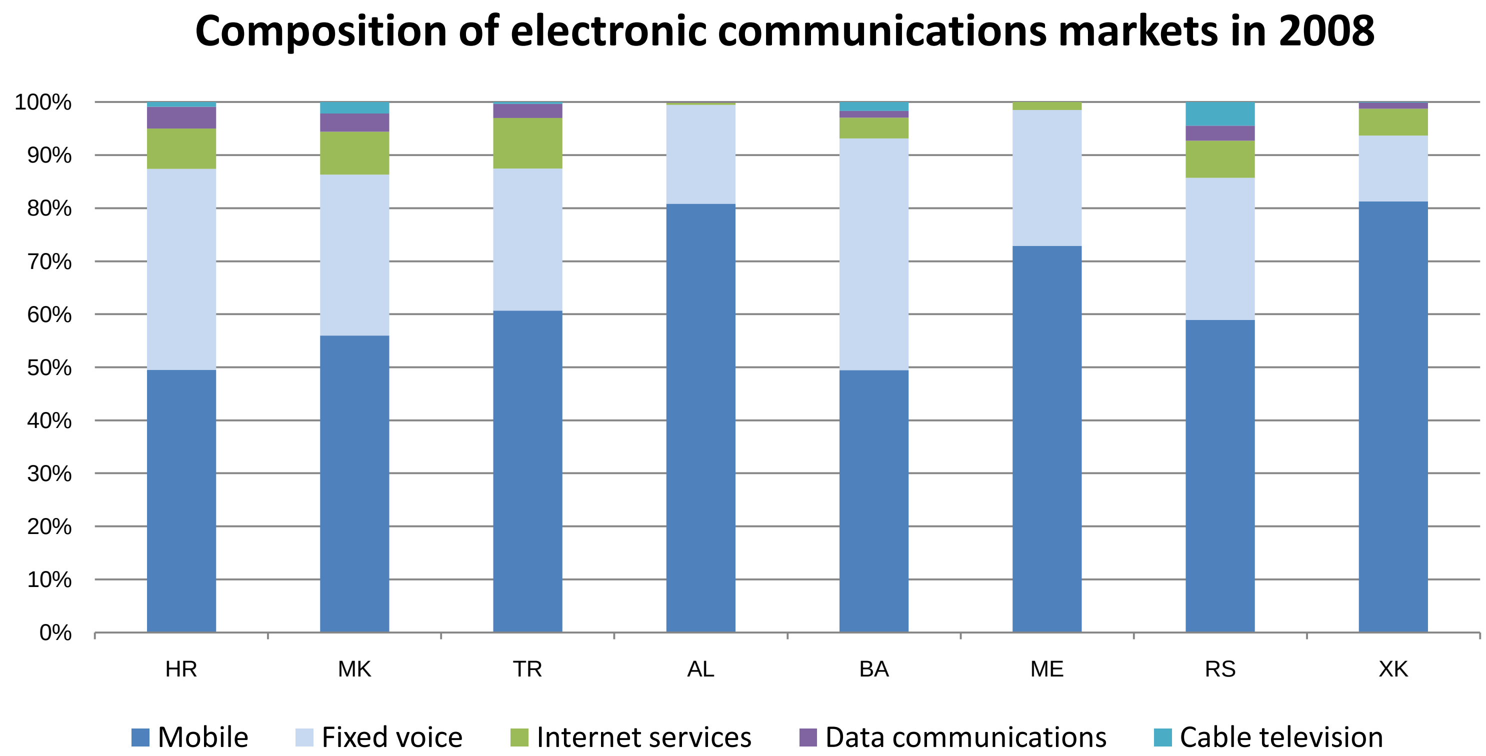
- Sector revenue in 2008 was €16.43bn
- 4% growth from €15.89bn in 2007, modest compared to 18% in 2006
- Strongest growth in Internet and Cable TV services
- Mobile telephony contributed to 60% of sector revenue
- Continued decline in fixed voice

Electronic communications sector (2/3)



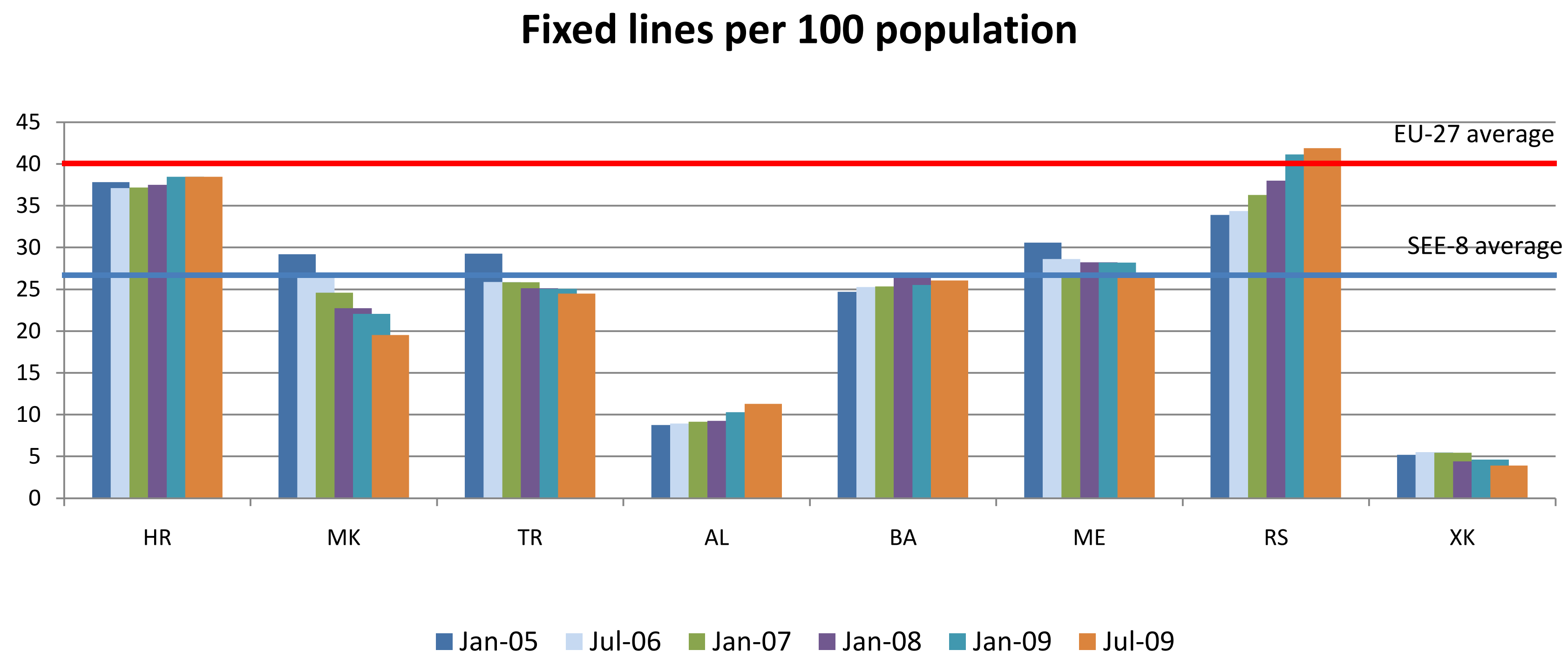
- Internet services: Serbia 80%, Macedonia 56%, Turkey 47%
- Data communications: Kosovo 89%, Serbia 62%, Croatia 57%
- Cable TV: Serbia 56%
- Fixed voice telephony: Turkey and Montenegro close to -20% decline

Electronic communications sector (3/3)



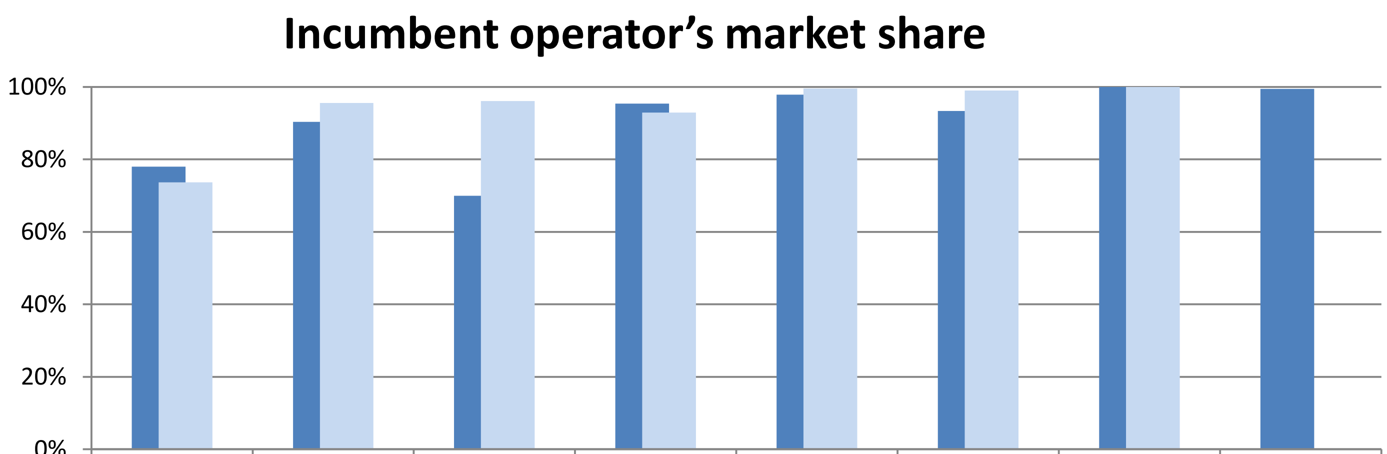
- Mobile communications over 50% in all countries
- In Albania and Kosovo – over 80%

Fixed telephony (1/3)



- Average 26 lines per 100 population in 2009
- Croatia and Serbia are closest to the EU-27 average of 40 lines
- Since 2005, continuous increase in Serbia and Albania
- Mobile to fixed substitution in Macedonia, Turkey, Montenegro

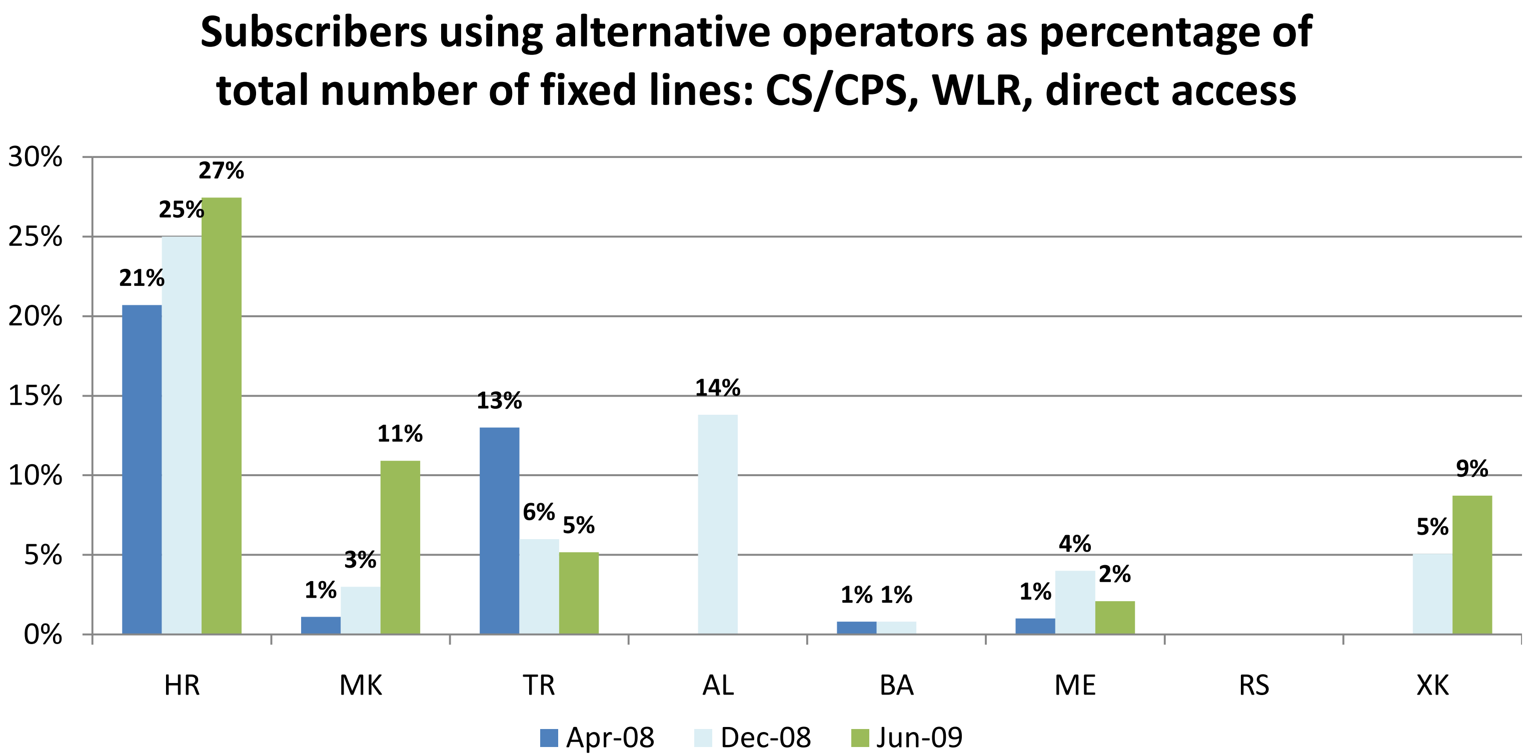
Fixed telephony (2/3)



	HR	MK	TR	AL	BA	ME	RS	XK
By revenue	78.0%	90.4%	70.0%	95.4%	97.9%	93.4%	100.0%	99.5%
By traffic	73.7%	95.6%	96.1%	92.9%	99.6%	99.0%	100.0%	

- Croatia and Turkey show decrease in incumbents’ revenue-based market shares
- In Turkey alternative providers have higher revenue based market share
- In most other countries incumbents retain more profitable market segments

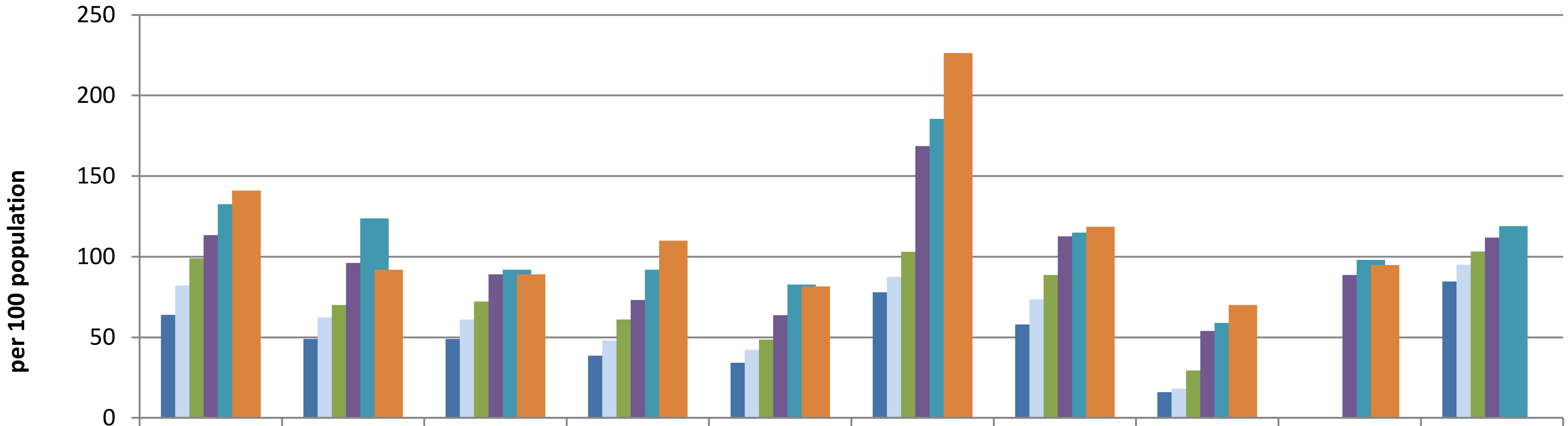
Fixed telephony (3/3)



- Steady increase in Croatia, Macedonia and Kosovo
- Remarkable drop in Turkey and Montenegro

Mobile telephony (1/3)

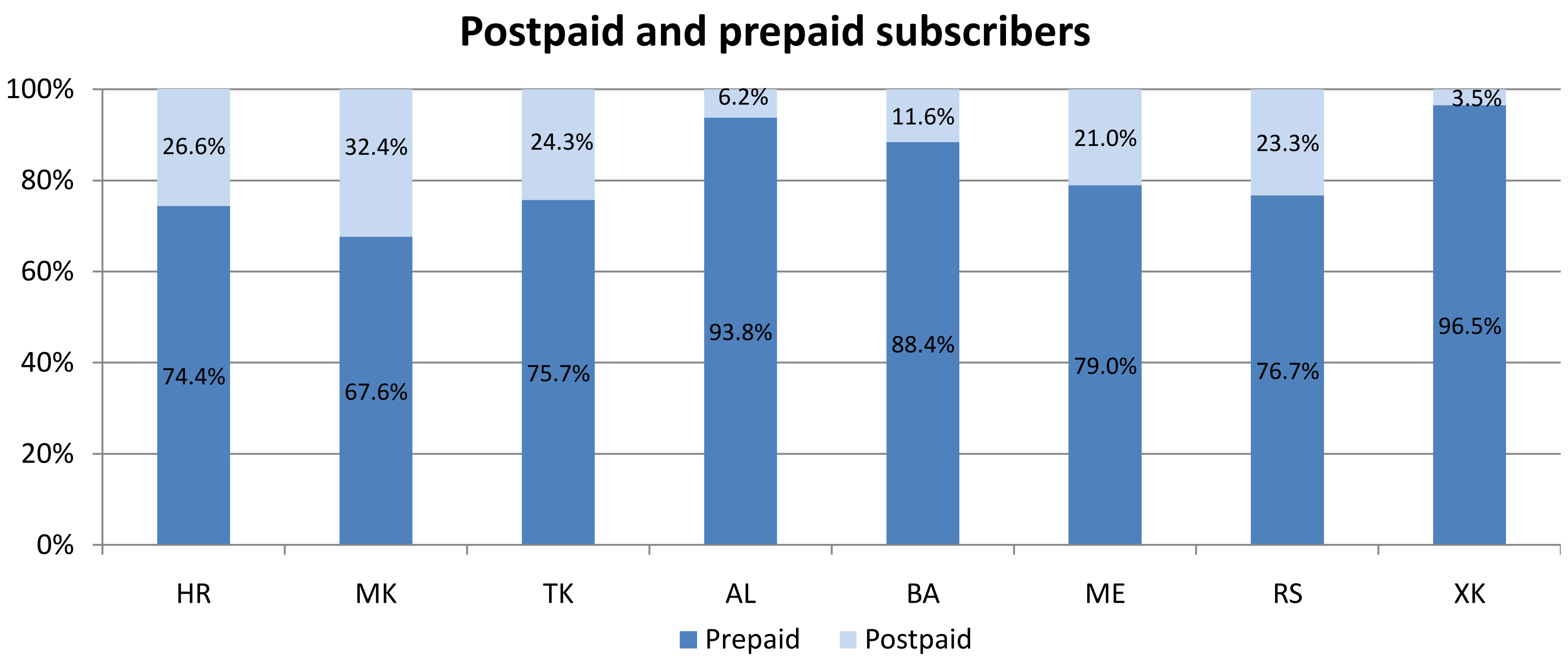
Growth in mobile penetration in 2005-2009



	HR	MK	TR	AL	BA	ME	RS	XK	SEE-8	EU-27
Jan-2005	64.0	49.0	48.9	38.6	34.2	77.9	57.9	16.0		84.6
Jan-2006	82.1	62.4	61.1	48.0	42.3	87.6	73.5	18.0		95.0
Jan-2007	99.0	70.1	72.2	61.0	48.6	103.0	88.6	29.5		103.2
Jan-2008	113.4	96.2	89.0	73.2	63.8	168.7	112.7	54.0	88.6	111.8
Jan-2009	132.5	123.7	92.0	92.0	82.7	185.5	115.0	59.0	98.1	119.0
Jun-2009	140.9	92.0	89.0	110.0	81.5	226.4	118.5	70.0	94.7	

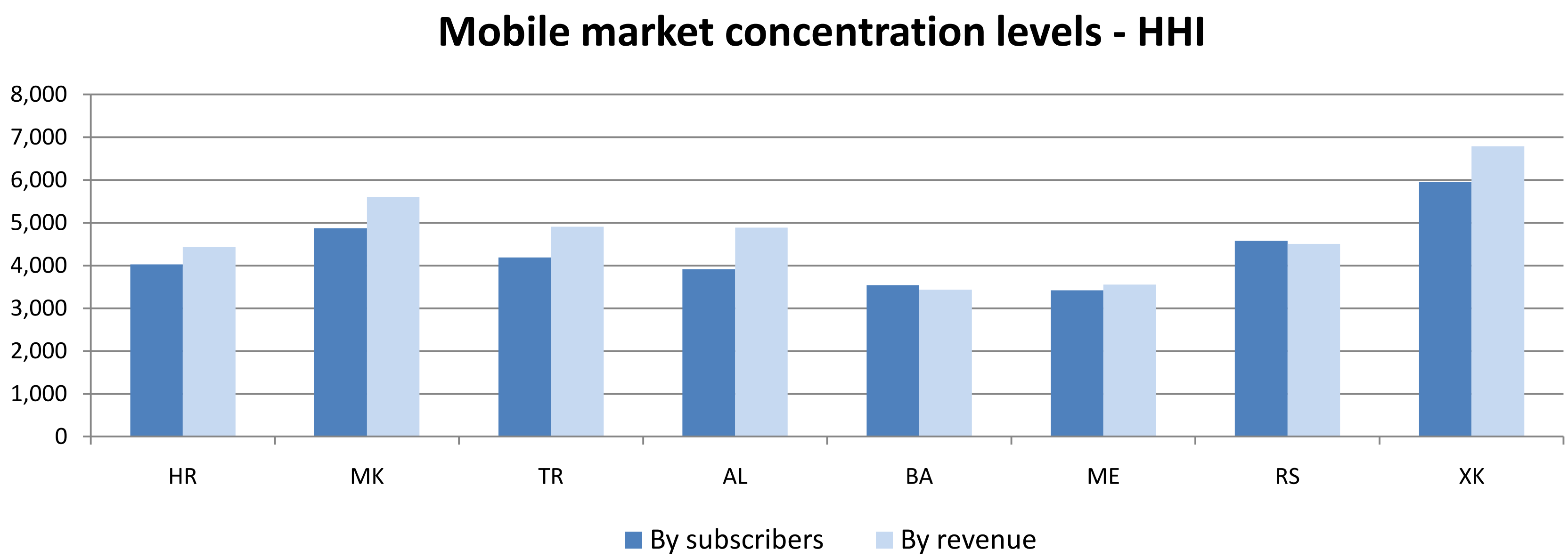
- Montenegro and Croatia have surpassed the EU-27
- Changed subscriber definitions – Macedonia
- 3G/UMTS licences issued in all countries except Albania and Kosovo
- Except Kosovo, there are three active operators and four in Albania

Mobile telephony (2/3)



- Increase in the number of postpaid subscribers in Croatia, Macedonia, Turkey and Serbia
- In Albania and Kosovo, nearly all subscribers are prepaid

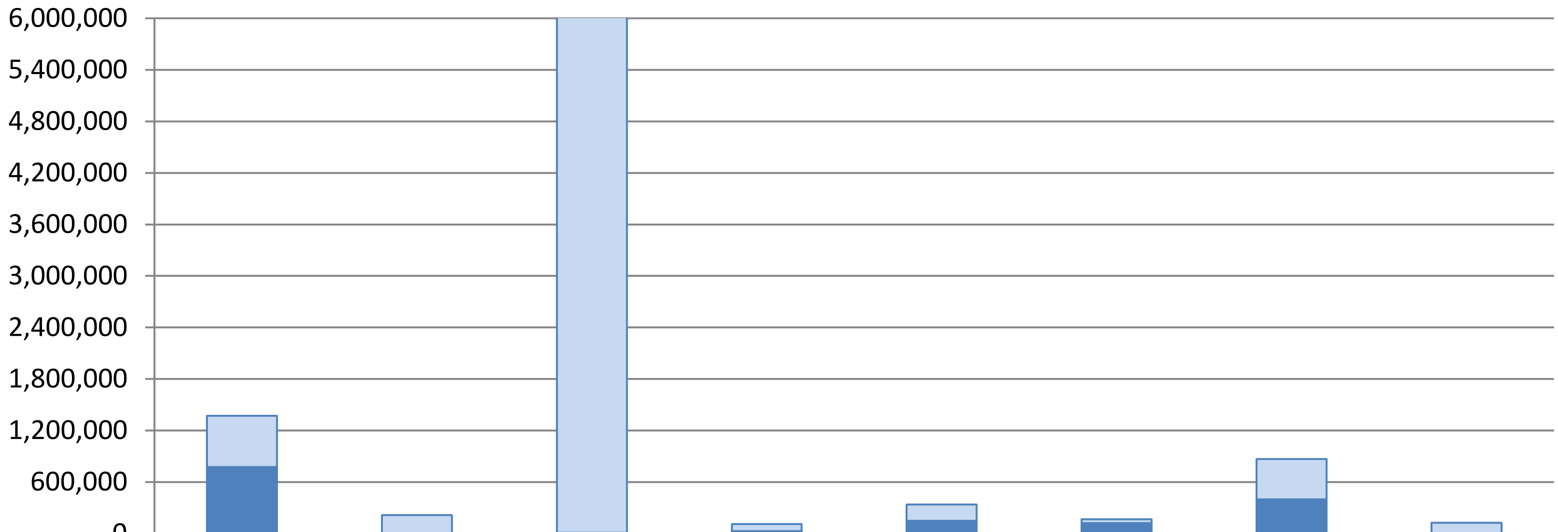
Mobile telephony (3/3)



- HHI = $x^2 + y^2 + z^2$, lowest possible value 3333 with three MNOs
- BiH and Montenegro are closest to even distribution of market shares
- Late entrants achieved growth in subscribers, but incumbents retain higher spending users
- Strong growth of late entrants in Albania
- Increased concentration in Macedonia

Fixed Internet and broadband (1/6)

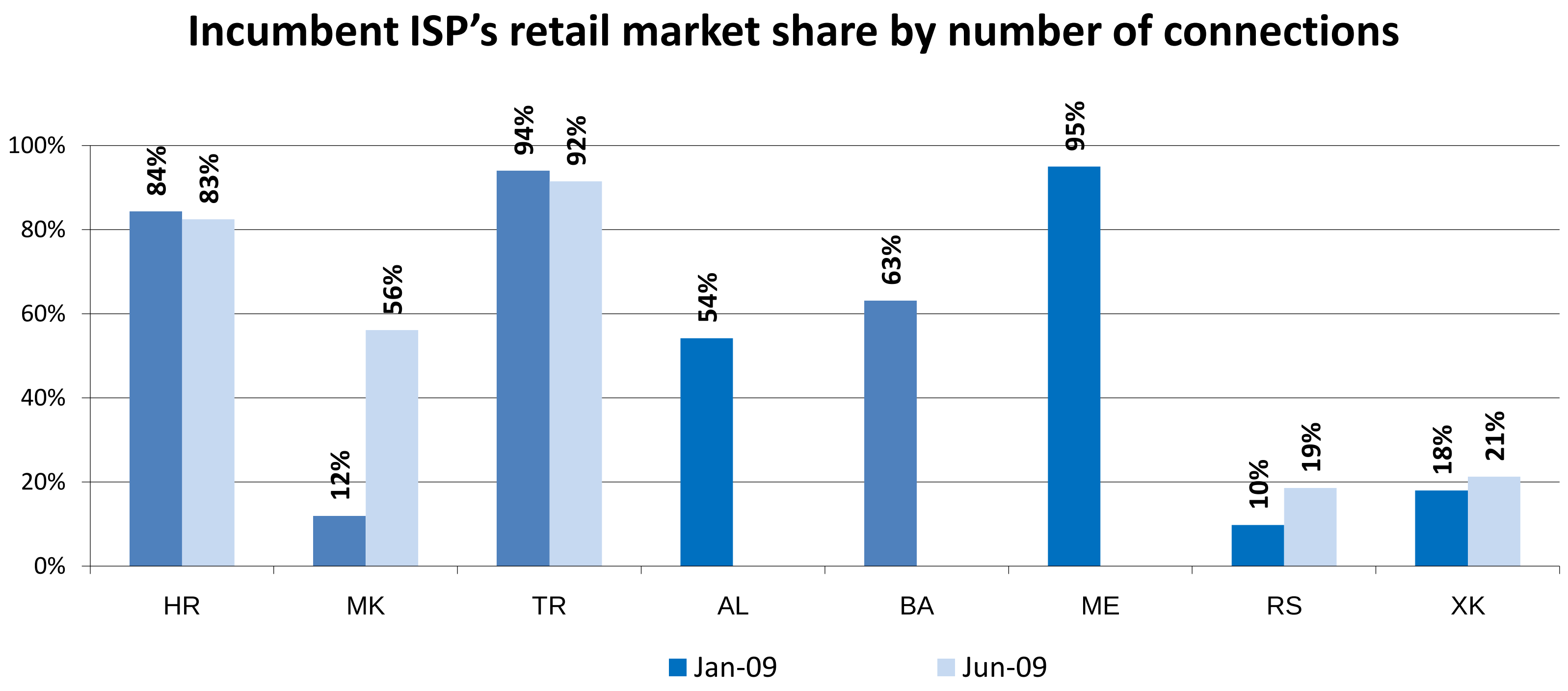
Fixed Internet connections – broadband and narrowband



	HR	MK	TR	AL	BA	ME	RS	XK
Broadband	595,929	210,015	6,190,712	80,000	188,460	41,889	468,702	125,949
Narrowband	774,021	3,143	9,941	28,512	147,703	123,026	397,202	

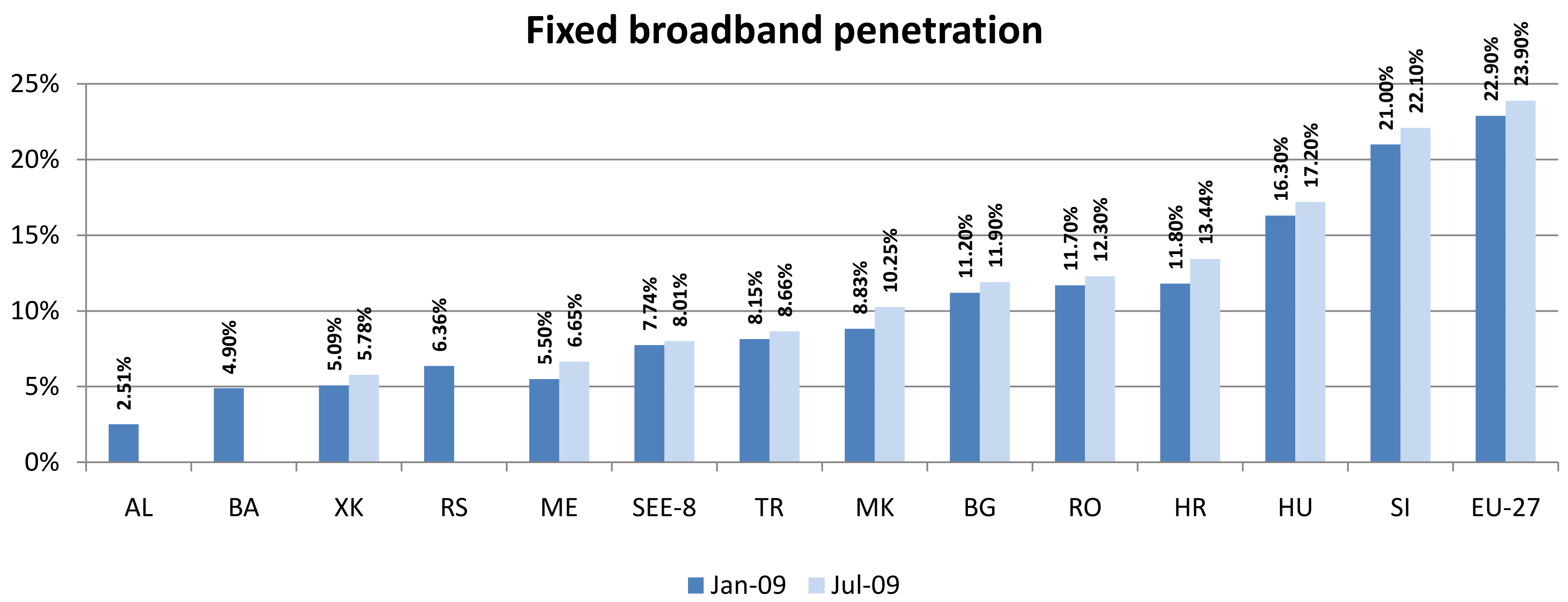
- Dial-up remains significant in Croatia, Montenegro and Serbia
- Strong increase in broadband in Macedonia, Turkey and Serbia

Fixed Internet and broadband (2/6)



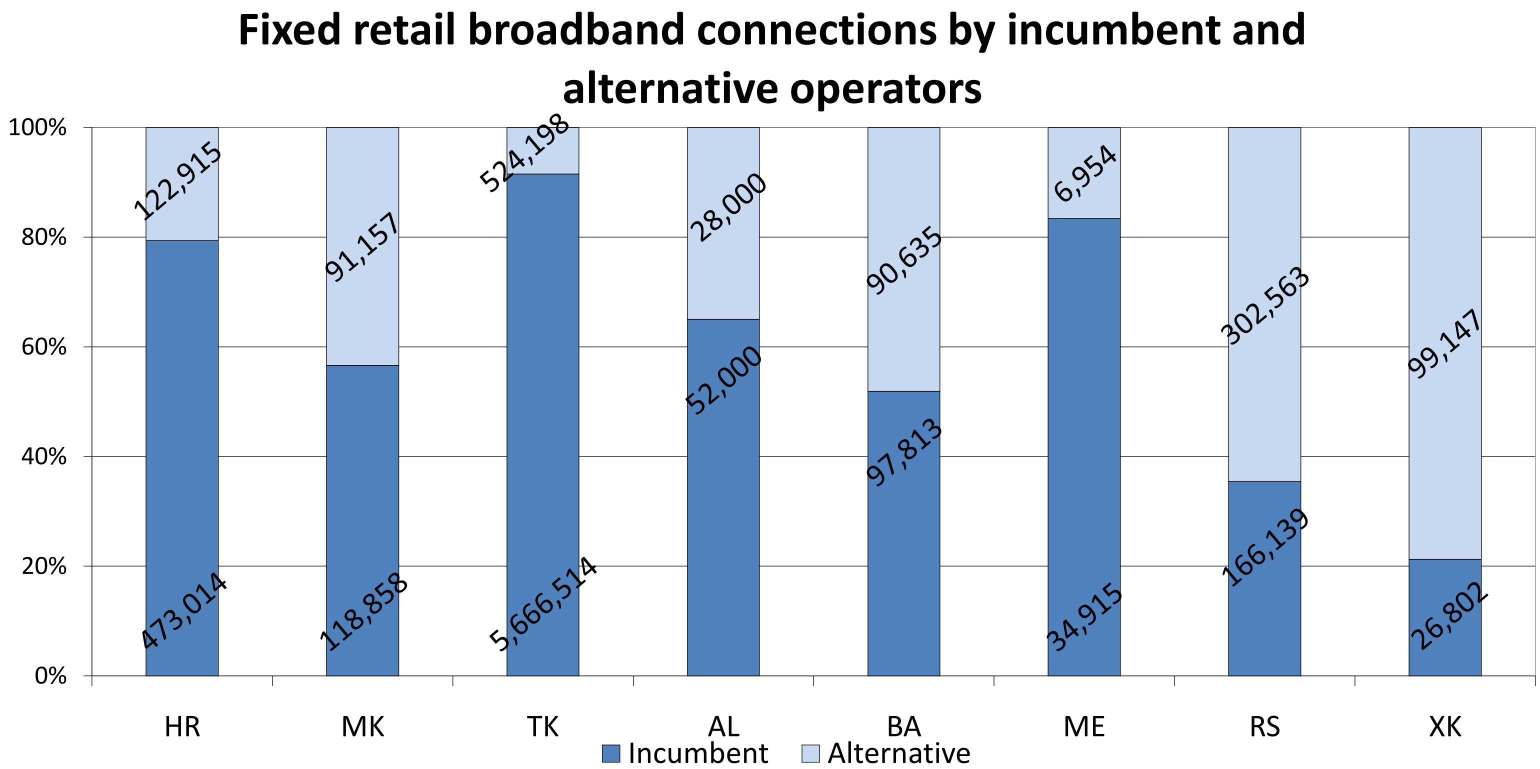
- Retail markets dominated by incumbent operators, except for Serbia and Kosovo
- Remarkable increase in the incumbent's market share in Macedonia

Fixed Internet and broadband (3/6)



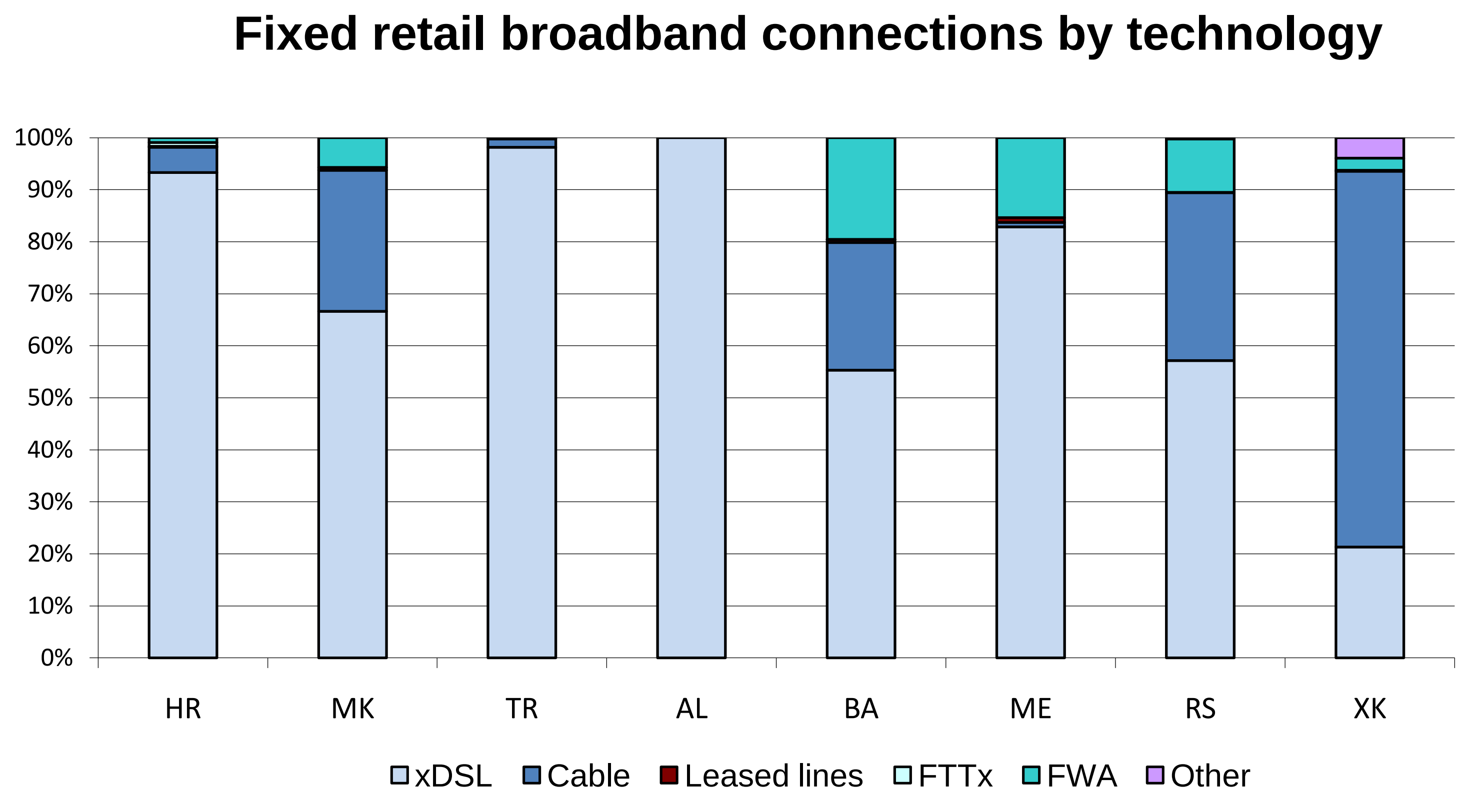
- Broadband penetration rate remains below the EU-27 average
- Highest penetration rate in Croatia – above Bulgaria and Romania

Fixed Internet and broadband (4/6)



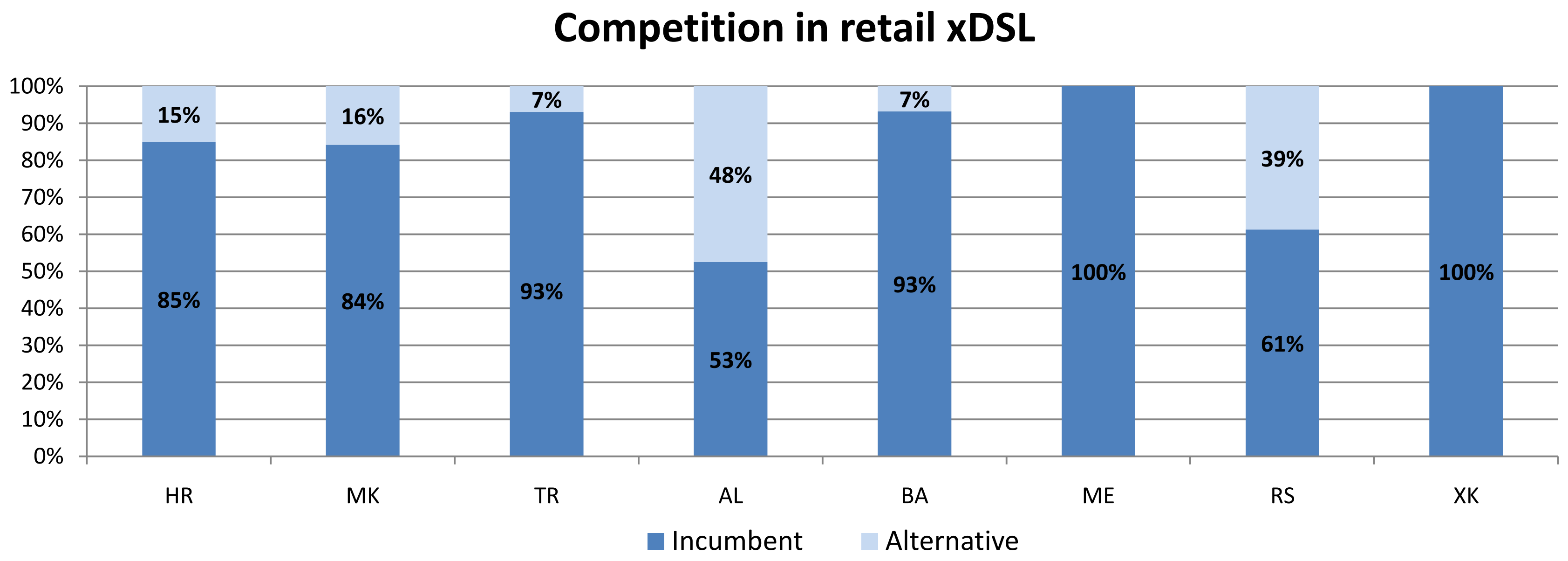
- Incumbents dominate broadband markets where xDSL is the main access technology: Croatia, Macedonia, Turkey and Montenegro
- Different situation is in Albania, BiH, Serbia and Kosovo – where competitors use alternative platforms and own infrastructure

Fixed Internet and broadband (5/6)



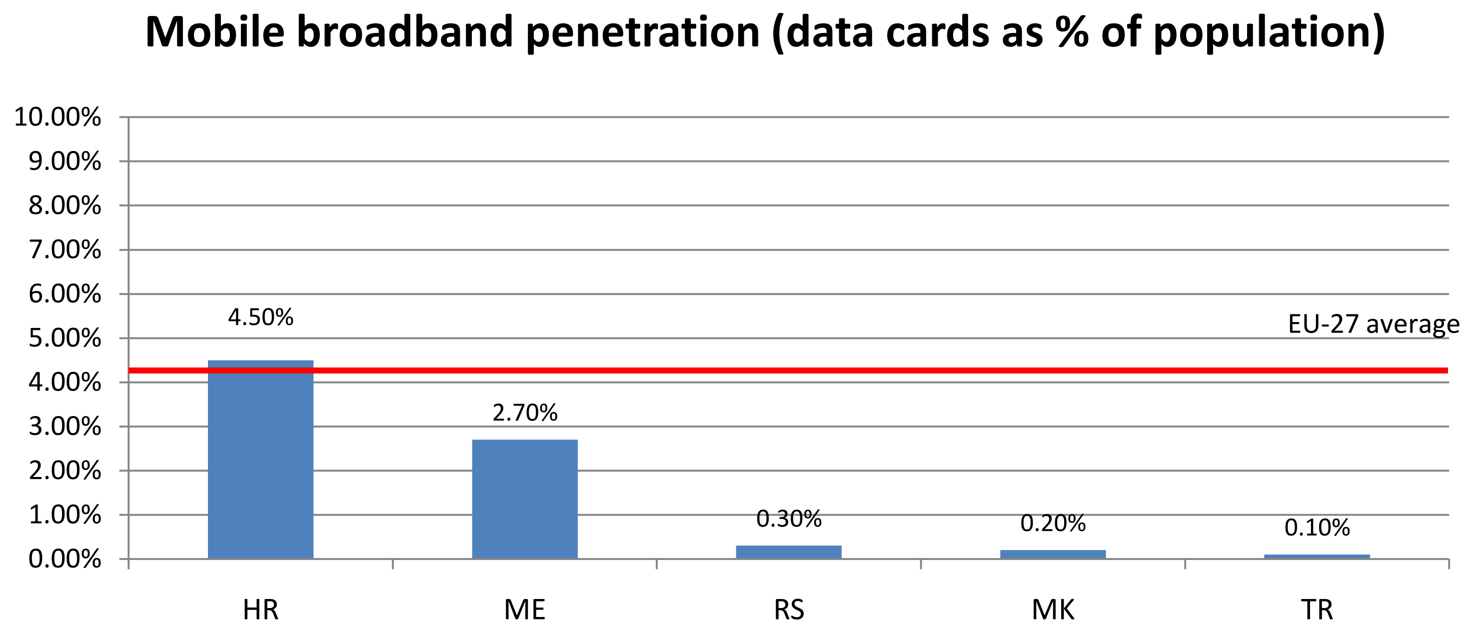
- xDSL is the dominant technology in most countries
- Strong cable presence in BiH, Serbia, Kosovo, Macedonia

Fixed Internet and broadband (6/6)



- In most countries alternative operators' market share remains below 20%, except Serbia and Albania
- In Serbia the incumbent introduced wholesale offers at a very early stage
- In Albania competitors offer xDSL services over own networks

Mobile broadband

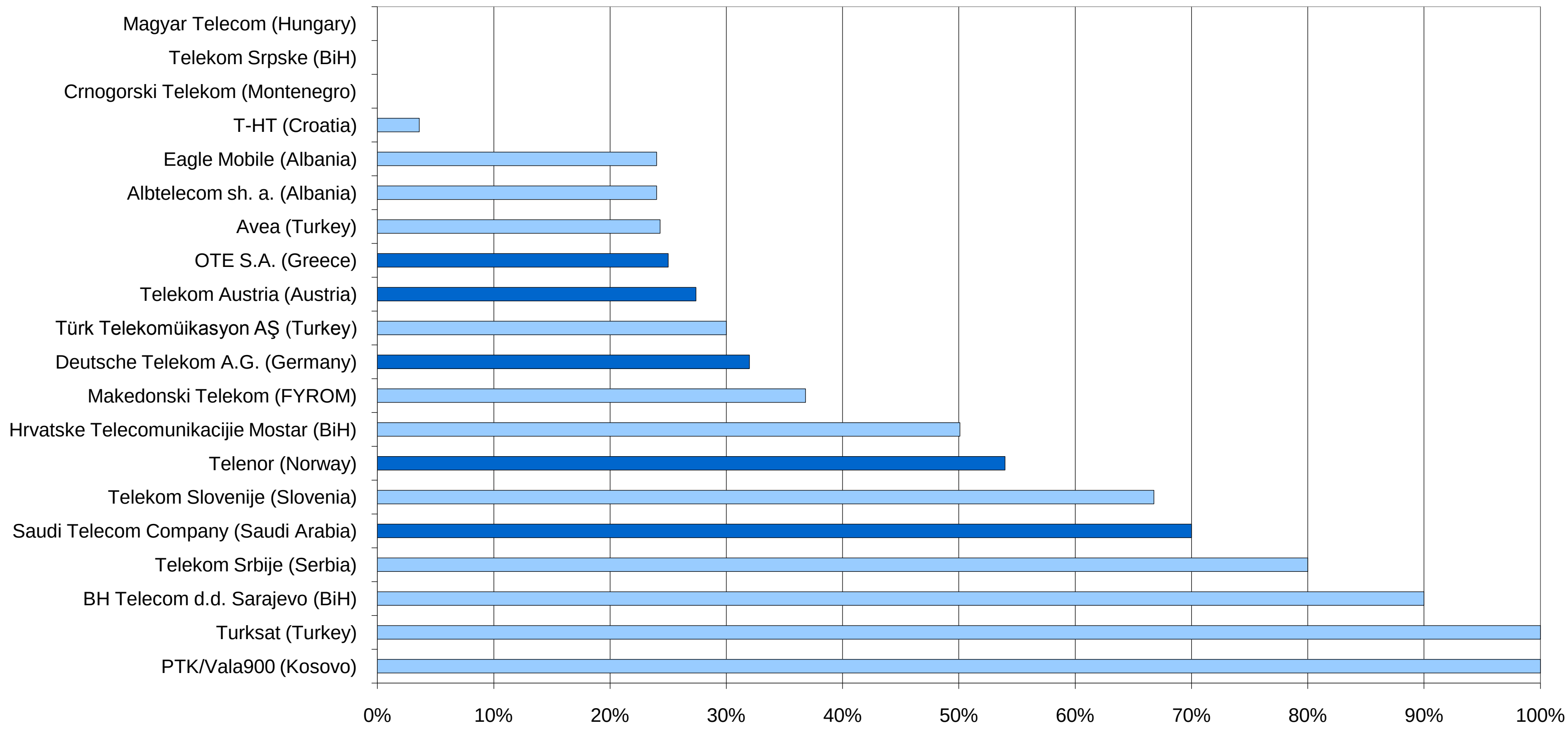


- Spectrum licences for provision of 3G/UMTS issued in all countries, except Albania and Kosovo
- 3G Commercial services launched in Croatia, Serbia, Macedonia, Montenegro and Turkey

Legislative and regulatory environment

- Legislation based on EU 2003 framework adopted in Croatia, Macedonia, Turkey, Albania and Montenegro
- Croatia – planned amendments to the Electronic Communications Law based on the new 2009 framework
- Serbia:
  - New law on spatial planning and construction, August 2009
  - Draft Electronic Communications Law
- Macedonia – draft amendments to Electronic Communications Law:
  - Division of tasks between the regulator and the ministry
  - Appointment and dismissal of the NRA management
  - Transparency and accountability, parliamentary control
- Albania: new institutional setup

State ownership of the incumbent operators



- State ownership from 24% to 100%, except Croatia and Montenegro
- Golden shares: Macedonia, Turkey and Serbia

Implementation of the EU framework

	HR	MK	TR	AL	BA	ME	RS	XK
Independent NRA established	√ HAKOM	√ AEC	√ BTK	√ AKEP	√ RAK	√ EKIP	√ RATEL	√ TRA
Full liberalisation (incl. international gateways)	2003	2005	2005	2007	2006	2004	2008	2008
General authorisation regime in force	√ 2008	√ 2005	√ 2009	√ 2008	X	√ 2008	X	X
Market analysis procedures started	√	√	√	√	√	√	√	X

Market analyses

	HR	MK	TR	AL	BA	ME	RS	XK
Market definition: • NRA taking into account EC recommendation	√	√	√			√		
• NRA discretion				√	√		√	√
SMP assessment: • Competition law	√	√	√	√		√		
• Threshold-based					25%		20-25%	25%
Remedies: • Listed in law and in license					√		√	√
• Discretionary	√	√	√	√		√		
Specified timeframe for MA?	3 years	1 year Changes proposed	3 years	2 years	1 year	X Deadline only for 1st round	X	X

Market analyses – recent developments

- **Croatia** - new round of MA consultations was launched in Spring 2009.
  - 5 markets with operators found as having SMP and remedied imposed (2-5/2007, 7/2007)
  - 4 markets – three criteria test not met (10/2003, 15/2003, SMS termination, retail voice services in mobile networks)
  - Final decisions adopted in July 2009
  - Additional markets planned for future assessments (1/2007; 6/2007)

- **Macedonia** - new round of MA consultations was launched in 2H 2009
  - Markets 1-6/2003 with incumbent found as having SMP. Public consultation until February 2010
  - Markets of leased lines (7-13-14/2003) with incumbent found with SMP. Consultation closed December 2009
  - Mobile markets 16 and 17/2003. Market 17 found competitive. Opinion from NCA expected before launch of public consultation

- **Turkey** - new round of MA consultations (Markets 1-17/2003)
  - All completed, except fixed transit services, still ongoing

- **Albania** - AKEP undertook new market analyses in 2H 2009:
  - Mobile wholesale market for call termination, access and call origination and retail mobile market. Two month public consultation, ended September 2009
  - Fixed retail access and calls (1-6/2003) and fixed wholesale interconnection (8-10/2003) published for consultation in September 2009
  - Leased lines markets (7, 13 and 14/2003). Public consultation from November 2009 until January 2010

- **Bosnia & Herzegovina** – in December 2009 RAK designated the three incumbents as having SMP in three markets:
  - public fixed telephone networks and services
  - public mobile telephony services
  - leased lines

- **Montenegro** – Market analyses started for the 7 markets under the EU 2007 Recommendation (ongoing)

Competitive safeguards

1. CS/CPS
2. Number portability
3. RIO
4. RUO
5. Wholesale broadband access
6. Wholesale line rental
7. National roaming and MVNO access

1. Carrier selection/carrier pre-selection

	HR	MK	TR	AL	BA	ME	RS	XK
Availability: • **Carrier selection**	√ 2005	√ 2007 2008 (local)	√ 2006 2009 (local)	X (required)	√ 2006	√ 2007	X	X
• **Carrier pre-selection**	√ 2005	√ 2007 2008 (local)	√ 2006 (no local)	X (required)	√ 2007	X (required)	X	X
Usage: • **Carrier selection**	No data	√ 4,450 ↓	No data	X	√ 26,991	0	X	X
• **Carrier pre-selection**	√ 244,260 ↓	No data	No data	X	No data	No data	X	X

2. Number portability

	HR	MK	TR	AL	BA	ME	RS	XK
Availability: • **fixed NP**	√ 2005	√ 2008	√ 9/2009	X	X	X	X	X
• **Mobile NP**	√ 2006	√ 2008	√ 2008	X	X	X	X	X
Implementation: • **Fixed NP**	√ 316,940	√ 14,456	√ 105	X	X	X	X	X
• **Mobile NP**	√ 86,500	√ 4,693	√ 7.5m	X	X	X	X	X

3. Interconnection

	HR	MK	TR	AL	BA	ME	RS	XK
Fixed RIO mandated	√ T-HT	√ Makedonski Telekom	√ Turk Telekom	√ Albtelecom	√ BH HT TS	√ Cmogorski Telekom	X	√ PTK
Latest RIO published	√ 10/2009	√ 8/2009	√ 12/2009	√ 2/2009	√ 11/2009	√ 4/2008	√ 4/2008 3/2009 (VoIP)	√ 1/2007
Mobile RIO mandated	√ T-Mobile VipNet	√ T-Mobile Cosmofon	√ Turkcell Vodafone Avea	√ Vodafone AMC	X	X	X	X
Mobile RIO published	√ 10/2009	√ 8/2008	√ 12/2009	√ 2/2009	X	X	X	X

Status:

1. RIOs recently revised in Croatia, Macedonia, Turkey, Bosnia & Herzegovina
2. No mobile RIOs in Bosnia & Herzegovina, Montenegro, Serbia and Kosovo

4. Local loop unbundling

	HR	MK	TR	AL	BA	ME	RS	XK
RUO mandated	√ T-HT	√ Makedonski Telekom	√ Turk Telekom	X	√ HT TS BH	X	X	X
Latest RUO published	√ 7/2009	√ 12/2008	√ 2/2009	X	√ 1/2010	X	X	X
LLU agreements	6	1	9	X	N/A	X	X	X
LLU lines (as % of fixed lines)	~116,000 (6.8%) ↑	~4,000 (0.9%)	~14,000 (0.07%)	X	N/A	X	X	X

Status:

1. Mandated in 4 countries.
2. Where LLU available, early phase of implementation, with very few lines unbundled
3. Recent introduction in Bosnia & Herzegovina
4. Decrease of LLU tariffs in Turkey. Review in Croatia, following market analysis decision

5. WBA and WLR

	HR	MK	TR	AL	BA	ME	RS	XK
Mandated: • Option 1 (DSLAM)	√	√	X	X	X	X	X	X
•Option 2 (ATM)	√	X	√	X	X	X	X	X
•Option 3 (IP)	√	√	√	X	X	X	√ commercial	X
•Option 4 (resale)	X	√	√	X	X	X	X	X
Implementation	~17,400 (1%)	~18,160 (4%)	~402,270 (2.3%) of which option 3 ~396k**	X	X	X	~103,700 (3.4%)	X
WLR	X	√ ~7,990*	X	X	X	X	X	X

(*) 1,233 lines in previous monitoring period
(**) 280k in previous monitoring period

7. Mobile wholesale

	HR	MK	TR	AL	BA	ME	RS	XK
MVNO access • **Mandated ex ante**	X	X	X	X	X	X	X	X
• **Available ex post**	X	X	√ origination	X	X	X	X	√ commercial
Implementation MVNO	X	X	X	X	X	X	X	√ 2 licenses
National roaming • **Mandated ex ante**	X	X	X	X	√ 2G only	X	X	X
• **Available ex post**	√ commercial	√ commercial	X roaming regulation	X		X	√ commercial	X
National roaming agreements	√	√	X	X	√	X	√	X

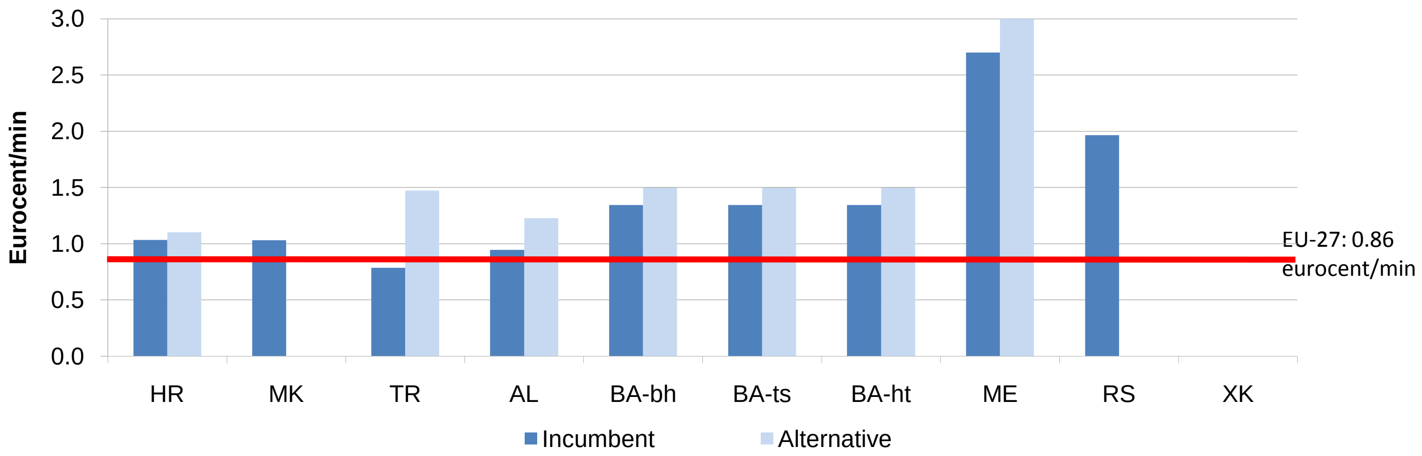
Status:

1. No ex ante MVNO obligations. Turkcell SMP origination upon request.
2. National roaming mandated in 1 country. Available commercially in HR, RS, MK

Wholesale tariffs

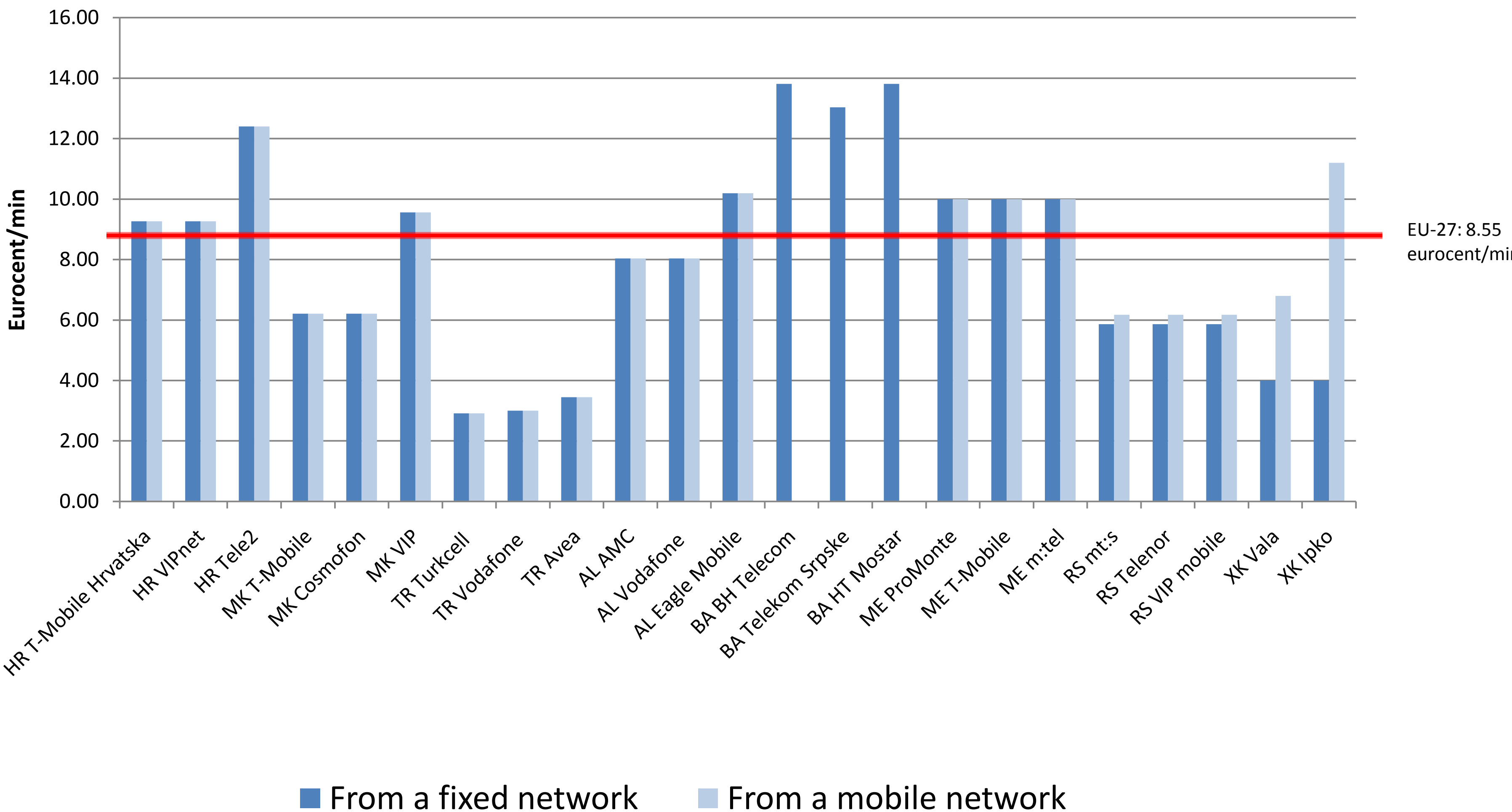
- Single transit fixed call termination
- Mobile call termination
- Local loop unbundling – monthly fees

Single-transit fixed call termination

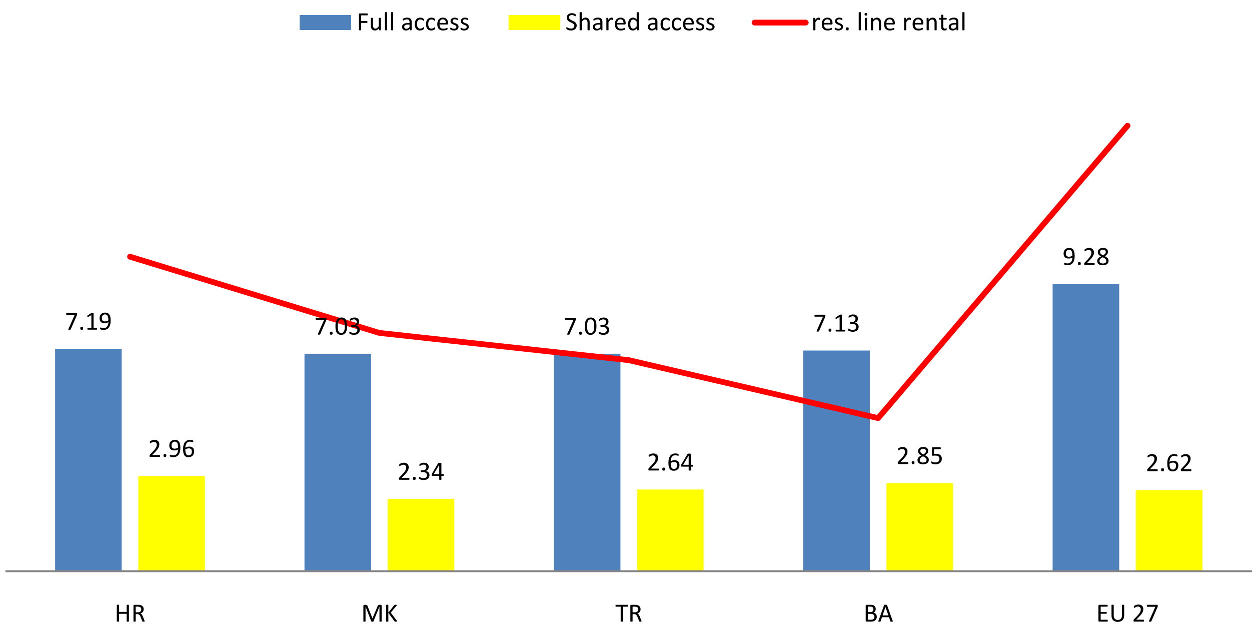


- Considerable asymmetries in Albania, Turkey and Montenegro
- Single-transit termination decreased from January 2009 in Albania, Turkey and Croatia
- Most rates considerably above the EU-27 average, except for Turkey
- In Macedonia, alternative operators' termination rates are confidential
- No alternative operators in Turkey and Serbia

Mobile call termination rates



Local loop unbundling – monthly fees



- For full unbundling, prices are below the EU-27 average
- Fees for shared access are aligned with the EU-27 average
- Consistency of LLU with incumbent retail offers?
- Since previous monitoring period LLU monthly fees decreased in Turkey by 12% (full access) and by 2.5% (shared access)

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