



Consolidation in the telecommunications sector --
trends and new challenges
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Recent mobile telecommunications mergers – a helicopter tour

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*Disclaimer: the views expressed are those of the presenter and cannot be regarded as stating an official position of the European Commission

Agenda

1. Past mobile telecom cases of the Commission
2. The H3G/Telefónica Ireland merger (Ireland)
3. The Telefónica DE/E-Plus merger (Germany)
4. Ex-Post assessment of merger effects

Past mobile telecom cases

Past mobile telecom cases of the Commission

Case	Description, Outcome
T-Mobile/tele.ring (2006)	<ul style="list-style-type: none">• 5 to 4 in Austria• Phase II, cleared with remedies
T-Mobile/Orange NL (2007)	<ul style="list-style-type: none">• 4 to 3 in the Netherlands• Phase I, cleared unconditionally
T-Mobile/Orange UK (2010)	<ul style="list-style-type: none">• 5 to 4 in the UK• Phase I, cleared with remedies
H3G Austria/Orange AT(2012)	<ul style="list-style-type: none">• 4 to 3 in Austria• Phase II, cleared with remedies
H3G/Telefónica IE (2014)	<ul style="list-style-type: none">• 4 to 3 in Ireland• Phase II, cleared with remedies
Telefónica DE/E-Plus (2014)	<ul style="list-style-type: none">• 4 to 3 in Germany• Phase II, cleared with remedies

The H3G/Telefónica Ireland merger



Characteristics of (retail) Irish mobile telecommunications market

Retail market shares (subscribers)

- | | |
|------------------------|--------|
| • Three Ireland | [~10]% |
| • O2 (including Tesco) | [~30]% |
| Merging Parties | |
| • Vodafone | [~40]% |
| • Eircom | [~20]% |

Further characteristics

- Existing Network Sharing agreements of O2/Eircom as well as Three/Vodafone
- Especially residential customers atomistic with virtually no bargaining power
- Entry of MNOs very unlikely (high investment costs and low profitability)
- MVNO entry (absent commitments) unlikely to create significant competitive pressure

Key Notifying Party's claims

- Three and O2 target different customer groups (different brand perceptions)
- Merger will lead to large cost savings
- Both Three Ireland and O2 will be restrained in their ability to compete effectively if the merger does not happen

Main Theory of Harm

Main observations

- Focus on non-coordinated effects
- Loss of an important competitive force:
 - There is currently an important competitive force
 - Degradation of competition in the absence of the merger unlikely
 - Competitors likely to follow price increases
- Weakening of Eircom due to degradation of network sharing

Used evidence

- Diversion ratios and market shares (also at the segment level)
- Internal documents
- Accounting data (profitability)
- Market investigation
- **Quantitative analysis**
 - **UPP analysis (based on diversion ratios and margins)**
 - Demand estimation (postpaid only) proved eventually unreliable

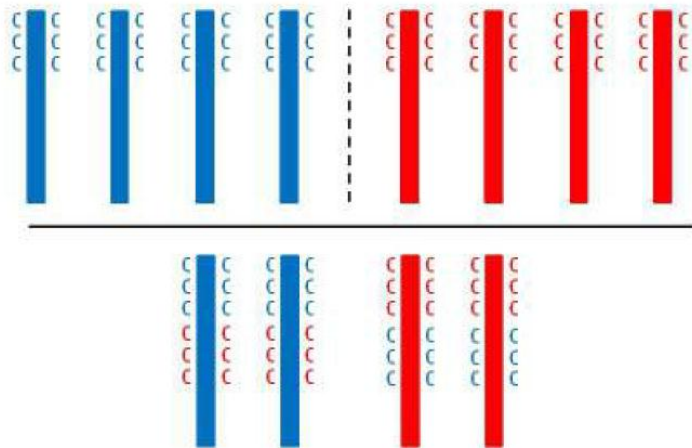
Further competition concerns

- Non-coordinated effects on wholesale market
 - Wholesale market growing; currently only Tesco Mobile significant MVNO
 - Reduction in number of potential suppliers may lead to less intense competition among MNOs to host MVNOs
- Coordinated effects on retail market
 - Three currently is likely a maverick
 - High market transparency on prices
 - Commission found some convergence between retail prices of MNOs

Intuition of mobile network synergies

Although network savings are generally plausible...

- Combined spectrum allows to use equipment more efficiently



... there are some important issues

- A large part of network savings can be achieved by network sharing
- Effect of reduction in network costs on customers unclear (better network quality and/or more aggressive competition?)

Efficiencies

Key efficiency claims

EC assessment

1

Scale economies

- Reduction in costs will lead to a higher cash flow which triggers additional investments
- Similar savings could not be achieved by network sharing

- Mainly fixed cost savings
- Presented evidence (e.g. price concentration study) insufficient to show customer benefit
- Network sharing would lead to similar cost savings

2

LTE deployment efficiencies

- Improved coverage and speed because without the merger
 - Three lacks 800 MHz spectrum
 - O2 plans slower LTE rollout

- O2 would roll out LTE to a similar extent
- Significant improvement of download speeds unlikely

3

Continued service in NBS¹ area

- Without the merger, Three would dismantle unprofitable sites and stop satellite solutions as well as repeaters

- Small part of submitted efficiencies accepted
- In the long run, LTE coverage of competitors in entire NBS area

1: National Broadband Scheme

Final Commitments – MVNO Part

- One MVNO upfront; one as a condition
- Innovative capacity-based MVNO model: MVNOs commit to purchase a share of the merged entity's capacity (committed capacity share increases over time)
- Option to acquire up to 30% of the merged entity's network capacity
- Minimum term of five years, with the possibility to extend the agreement up to 10 years
- Spectrum offered during 10 years to capacity MVNOs

Final Commitments – Network sharing offer to Eircom

- H3G commits to offer Eircom to prolong network sharing agreement under certain terms
- Given the importance of network sharing in Ireland, this provides an option for Eircom to achieve its roll-out plans

MVNO remedy in Austrian M.6497 case compared to Irish MVNO commitment

MVNO remedy Austria

- Access to up to 30% of H3G's network for up to 16 MVNOs in the coming 10 years
- Pay-as-you-go (PAYG) wholesale terms: 1 cent/minute for voice, 0.4 cents for SMS and 0.2 cents per MB for data
- Upfront commitment to enter into an agreement with one MVNO
- If margins are small, few incentives to launch despite having signed a contract (Upfront MVNO UPC has not launched yet)

MVNO remedy Ireland

- Access to up to 30% of merged entity's capacity in coming 10 years
- Capacity MVNO model: MVNOs need to commit to buying certain capacity upfront
- One MVNO upfront and one MVNO as a condition
- Strong incentives to launch immediately after capacity is provided

Comparison MNO vs. Capacity MVNO

	MNO	Capacity MVNO
Network costs	<ul style="list-style-type: none"> • High fixed costs, very low incremental network costs within existing capacity • Significant incremental costs for capacity expansions 	<ul style="list-style-type: none"> • High fixed costs (commitment) • Within committed capacity zero incremental network cost • High incremental cost for optional capacity
Future Proofing	<ul style="list-style-type: none"> • MNO may benefit from future technologies • Cost reductions due to dropping equipment prices • Capacity expansions feasible 	<ul style="list-style-type: none"> • Technological developments may not be foreseeable/included • Contractual arrangements determine adjustment of access terms • Committed capacity and optional capacity predetermined
Term	<ul style="list-style-type: none"> • Guaranteed access to network capacity at actual costs 	<ul style="list-style-type: none"> • After pre-defined term, access prices depend on bargaining position and may include significant mark-up on costs

Discussion of Irish MVNO commitment

- Capacity MVNOs should have incentives to compete more aggressively than MVNOs on a PAYG basis
- Capacity MVNO concept very innovative, but has not yet been tested in practice
- Size of remedy: implied minimum divested capacity is slightly below overlap¹
- Spectrum option offers (attractive?) possibility to migrate to MNO model as customer base grows

1: Assuming similar data usage of subscribers of O2/Three/Capacity MVNOs

The Telefónica DE/E-Plus merger (Germany)



Characteristics of German mobile telecommunications market

Retail market shares (subscribers)

- T-Mobile (DTAG) [20-25]%
- Vodafone [20-25]%

- E-Plus [15-20]%
- O2 Deutschland [15-20]%

Merging Parties

- Freenet [10-15]%
- Drillisch [0-5]%
- 1&1 [0-5]%
- Other SPs/MVNOs [0-5]%

Further market characteristics

- Both O2 and E-Plus strong in pre-paid segment
- Freenet hosted by all MNOs, in particular by T-Mobile and VF
- Especially residential customers atomistic with virtually no bargaining power
- Industry generally profitable
- Entry of MNOs post-merger depending on entry conditions
- MVNO entry (absent commitments) unlikely to create significant competitive pressure

Key claims of Notifying Party

- Merged entity intends to offer improved quality network and become stronger in the segment of high value customers ("Merger to compete")
- In low value segment, competitive pressure maintained due to non-MNOs
- Large claimed synergies with NPV of roughly EUR 5 bln, mostly stemming from network consolidation

Main Theory of Harm

Main observations

- Focus on non-coordinated effects
- Both E-Plus and O2 are currently important competitive forces (especially E-Plus growing)
- E-Plus and O2 are close competitors with a focus on pre-paid customers
- Loss of competition between E-Plus and O2
- Competitors would likely follow price increases

Used evidence

- Diversion ratios and market shares (also at the segment level)
- Market investigation
- Internal documents
- Accounting data (profitability)
- **Quantitative analysis**
 - **UPP analysis (based on diversion ratios and margins)**
 - **Demand estimation & Merger simulation**

Efficiency analysis: Some differences between German and Irish case

Three Ireland/O2 Ireland

Telefónica DE/E-Plus

1

Network sharing

- Two preexisting network sharing (NS) agreements
- NS may be reduced as a consequence of the Transaction

- No existing NS, but MNOs have been in NS negotiations
- Transaction may prevent NS that otherwise would likely occur

2

Impact of (fixed) cost savings

- Claimed positive impact because of more investments due to relaxed liquidity constraints

- Claimed positive impact because of MNO's pricing approach that includes also non-incremental cost savings

3

Presented evidence

- Submitted evidence contains mostly general arguments as to why Transaction is pro-competitive (studies on price effects, financial constraints and quality enhancing effects)

- Submitted evidence quantifies specific benefits of German Transaction (on demand and supply side)

Final Commitments

Similar to
Irish remedy

MVNO Remedy

- Commitment to sell share of total capacity of the merged company's network (up to 30%) to capacity MVNO(s)
- Capacity MVNO(s) need to commit to buying capacity upfront
- Capacity MVNO(s) obtain access to all current and future technologies

MNO Remedy

- Offer designed to facilitate MNO entry
- Spectrum lease of 2x10 MHz in the 2.1 GHz band and of 2x10 MHz in the 2.6 GHz band
- National roaming
- Divestiture of sites
- Passive radio network sharing
- Sale of shops offer

Non-MNO Remedy

- Extend existing wholesale agreements with wholesale partners
- Offer 4G services to the wholesale market

Current pilot project on ex-post evaluation

On-going pilot project on ex-post evaluation of mobile telecom mergers

- DG COMP intends to evaluate past mergers in the mobile telecommunication sector
- Cooperation with Austrian RTR and Dutch ACM
- Ideally, complement quantitative study (DiD) with qualitative assessment of the cases
- Mergers of mobile telecom sector chosen because of importance and to show how evaluation can be done in an industry that is challenging to evaluate
- Insights of pilot project also valuable with a view to setting up a stable ex-post evaluation process

Challenges of evaluating mergers in the mobile telecom industry

- Dynamic industry ⇒ Need to separate merger effects from developments that are not merger specific; this requires data also from non-merging MNOs and from countries without merger
- Complex tariffs with many price dimensions (eg. price per call/SMS/MB) ⇒ Need to derive overall price level
- Handset subsidies relevant and difficult

Challenges of evaluating mergers in the mobile telecom industry

Challenge

Industry dynamics
(new technologies
etc.)

Complex tariffs with
many price
dimensions (eg. price
per call/SMS/MB)

Many tariffs available

Implication

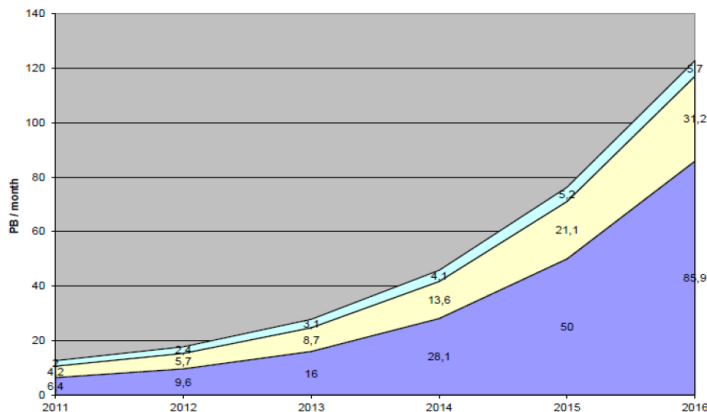
- Need to separate merger effects from developments that are not merger specific
- This requires data also from non-merging MNOs and from countries without merger
- Need to aggregate different price dimensions to overall price level
- Address difficulties to measure certain price dimensions (e.g. handset subsidies)
- Large amount of data required
- Information on relative importance of different tariffs would be ideal

Conclusion & Discussion

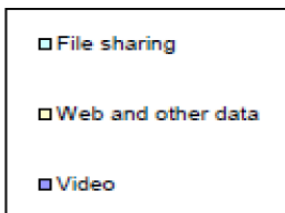
Backup - Trends in the mobile telecommunications industry

Increase in mobile data demand and reduction of mobile data prices expected

Predicted mobile data traffic

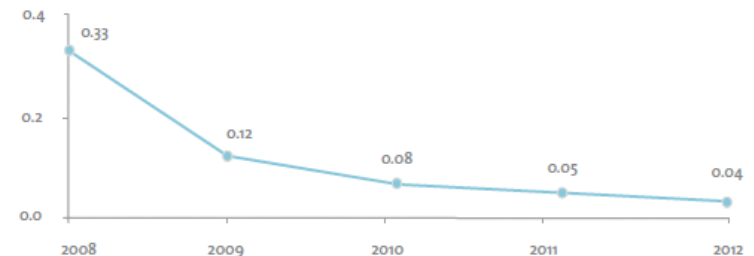


Source: Cisco VNI (2012), WIK calculation; Study on Impact of traffic off-loading and related technological trends on the demand for wireless broadband spectrum prepared for DG Connect/European Commission, 2013, p. 155.



Evolution of mobile data prices

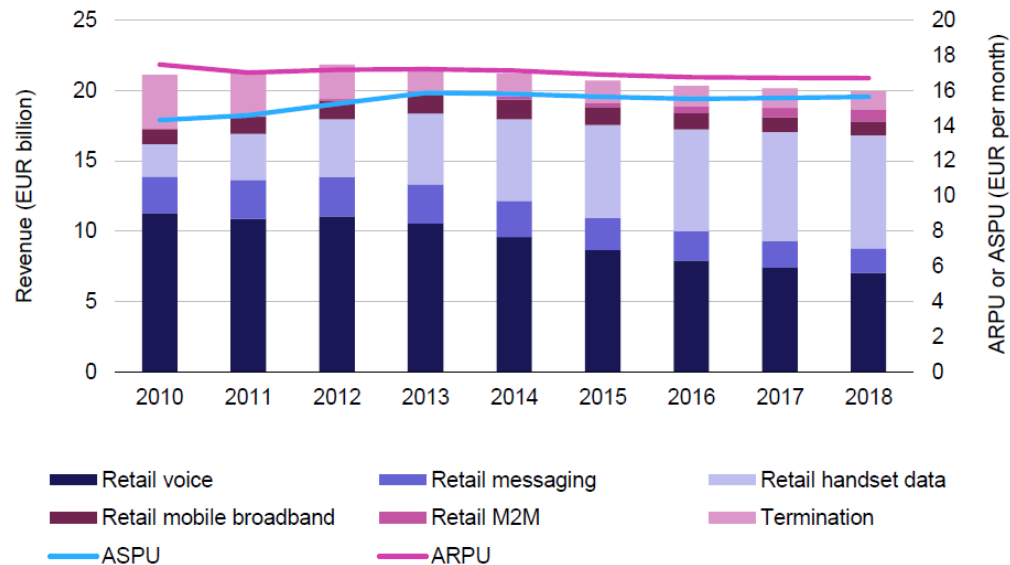
Mobile data revenue per unit: € per MB¹



¹ Average retail revenue for Netherlands and France

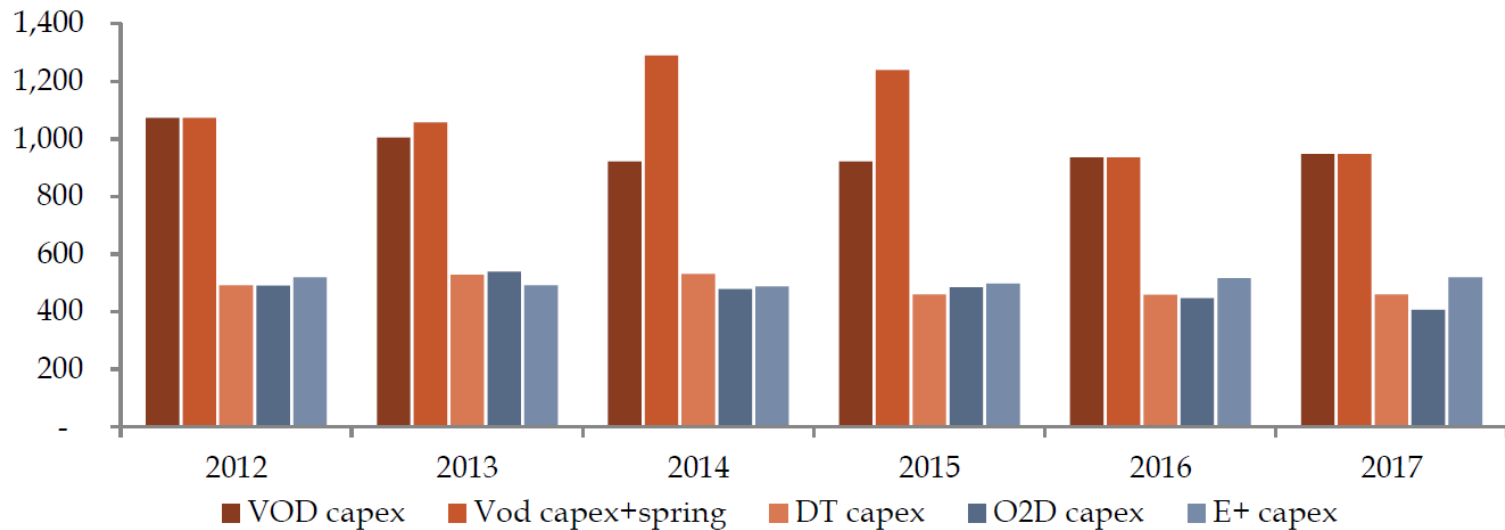
² Cumulated mobile data traffic for Netherlands and France
Source: Regulators; BCG analysis

Mobile revenues in Germany stable - mobile data revenues increase



Mobile data revenues expected to grow slower than mobile traffic expected to increase due to decreasing mobile data prices

Germany: roughly stable investments



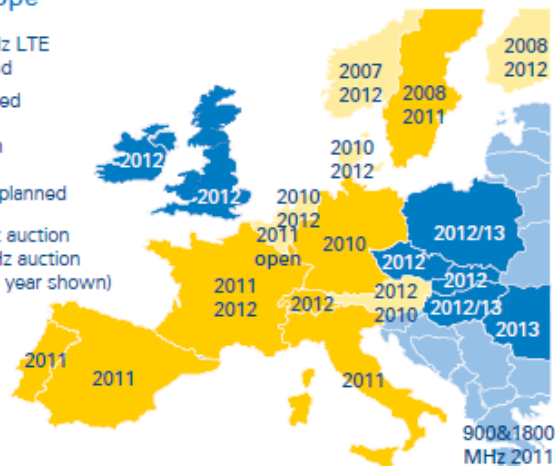
LTE rollout depends significantly on spectrum availability

Differences in timing of LTE spectrum auctions across Europe...

... affected LTE rollout

Figure 1: Concluded and planned LTE spectrum auctions in Europe

■ 800 and 2600 MHz LTE auctions concluded
■ LTE auction planned
■ 2600 MHz auction concluded, 800 MHz auction planned
 2008 □ year of 800 MHz auction
 2012 □ year of 2600 MHz auction
 (joint auction if only one year shown)



Source: Arthur D. Little, regulator homepages

Country	Operator	Launched
Norway	TeliaSonera	15.12.09
Sweden	TeliaSonera	15.12.09
Uzbekistan	MTS	28.07.10
Uzbekistan	UCell	09.08.10
Poland	Mobyland & CenterNet	07.09.10
USA	MetroPCS	21.09.10
Austria	A1 Telekom Austria	05.11.10
Sweden	TeleNor Sweden	15.11.10
Sweden	Tele2 Sweden	15.11.10
Hong Kong	CSL Limited	25.11.10
Finland	TeliaSonera	30.11.10
Germany	Vodafone	01.12.10
USA	Verizon Wireless	05.12.10
Finland	Elisa	08.12.10
Denmark	TeliaSonera	09.12.10
Estonia	EMT	17.12.10
Japan	NTT DoCoMo	24.12.10
Germany	Deutsche Telekom	05.04.11
Philippines	Smart Communications	16.04.11
Lithuania	Omnitel	28.04.11