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Eidgenössisches Departement für
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Bundesamt für Kommunikation BAKOM
Abteilung Telecomdienste

Biel, Juli 2009

Der Schweizer Fernmeldemarkt im internationalen Vergleich

Um die Schweiz erweiterter Auszug aus dem 14. Implementierungsbericht der Europäischen Union

Entsprechend der von der Europäischen Kommission angewandten Methode wurden alle Preise zum nominalen Wechselkurs umgerechnet

Vorwort

Schon seit längerer Zeit veröffentlicht die Europäische Kommission jährlich eine Mitteilung, die sich an den Rat, das Europäische Parlament, den Europäischen Wirtschafts- und Sozialausschuss und den Ausschuss der Regionen, welche über den Stand des europäischen Binnenmarkts der elektronischen Kommunikation berichtet. Die neuste Ausgabe dieses Berichts, auch 14. Implementierungsbericht der Europäischen Union genannt, ist im März 2009 erschienen[1].

Dieser Bericht liefert nicht nur eine umfassende Analyse des Regulierungsumfelds in der Europäischen Union (EU) und in deren Mitgliedstaaten. Anhang 2 enthält auch eine Fülle von Informationen über den Stand des Marktes für elektronische Kommunikation im Jahr 2008 und über die Veränderungen zwischen 2007 und 2008. Die statistischen Daten in diesem Anhang stellen nicht nur eine äusserst umfassende Beschreibung des Fernmeldemarkts dar und haben den Vorteil, auf einer einheitlichen und transparenten Methodik zu basieren und somit den direkten Vergleich zwischen den betrachteten Ländern zu ermöglichen.

Da sich die Schweiz geografisch, wirtschaftlich und kulturell im Herzen Europas befindet, ist es angezeigt, diese Vergleiche und Analysen auf unser Land auszudehnen. Aus diesem Grund haben wir den Anhang 2 des 14. Implementierungsberichts um die Schweiz erweitert, soweit dies möglich war.

Hauptzweck des vorliegenden Berichts ist, auf der Grundlage von Anhang 2 des 14. Implementierungsberichts der EU die Schweiz mit den EU-Mitgliedstaaten zu vergleichen. Zudem sollen die darin enthaltenen Zahlen einen möglichst vollständigen Überblick über den Schweizer Fernmeldemarkt im Jahr 2008 geben. Zu diesem Zweck wurden die verschiedenen von der Europäischen Kommission ausgearbeiteten Methoden jeweils übernommen. Im Übrigen stammen die Passagen, die nicht in blauer Schrift erscheinen, direkt aus Anhang 2 des 14. Implementierungsberichts und stellen somit Zitate dar. Kapitel 5 und 6 wurden nicht übernommen, da keine entsprechenden Daten für die Schweiz vorlagen.

Der vorliegende Bericht ist bezüglich seines Datenteils nur auf Englisch verfügbar. Die Zusammenfassung ist hingegen auf Deutsch, Französisch, Italienisch und Englisch erhältlich.

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[1] Kommission der Europäischen Gemeinschaften, Mitteilung der Kommission an den Rat, das Europäische Parlament, den Europäischen Wirtschafts- und Sozialausschuss und den Ausschuss der Regionen. Bericht über den Stand des europäischen Binnenmarkts der elektronischen Kommunikation 2008 (14. Bericht), KOM(2009), 140, Brüssel, 24.03.2009. http://ec.europa.eu.

Zusammenfassung

Wirtschaftliche Marktindikatoren

Mit einer Einkommenswachstumsrate von 0.7% im Jahr 2007 erreicht der Wert des Schweizer Fernmeldemarktes CHF 16.4 Milliarden, was 3.2% des BIP entspricht. Dieser Anteil ist etwas höher als derjenige in der EU, der 2.9% beträgt.

Die Schweizer Investitionen in den Fernmeldesektor entsprechen 17.9% der erzielten Einkünfte und liegen somit etwa 3 Prozentpunkte über dem Ende 2007 für Europa gemeldeten Prozentsatz (14.7%).

Mobilfunkmarkt (Kapitel 1)

Marktdurchdringung mit Mobilfunkdiensten

Im Oktober 2008 betrug die Marktdurchdringung mit Mobilfunkabonnementen 110.9% der Schweizer Bevölkerung und lag somit um rund acht Punkte unter dem gewichteten Durchschnitt der EU-Länder. Die Schweiz hatte 2004 mit einer Durchdringung von 86.7% gegenüber 84.6% in den Nachbarländern noch einen kleinen Vorsprung; seither verzeichnet sie aber eine niedrigere Wachstumsrate als die EU. Zurzeit ist die Position der Schweiz im untersten Drittel der Klassierung. In der EU liegt die Marktdurchdringung heute in nur acht der 27 Mitgliedsländer unter 110.9%, wobei Frankreich mit 88.0% das Schlusslicht bildet. Am höchsten ist die Durchdringungsrate mit 152.0% in Italien. Von insgesamt 8.54 Millionen Mobilfunknutzerinnen und -nutzern in der Schweiz haben 42.7% eine Prepaid-Karte und 57.3% ein Abonnement gewählt. In der Europäischen Union ist das Verhältnis zwischen diesen zwei Zahlungsformen beinahe umgekehrt (58.2% Prepaid, 41.8% Abonnement). Dies ist ein Hinweis darauf, dass Schweizer Teilnehmerinnen und Teilnehmer ihr Mobiltelefon möglichst ohne Einschränkungen nutzen wollen, selbst wenn es finanziell nicht immer die günstigste Variante ist. Es könnte aber auch ein Hinweis auf ein irrationales Konsumentenverhalten sein, welches dazu führt, dass eine einmal getroffene Wahl nicht mehr geändert wird[2].

Akteure auf dem Markt für Mobilfunkdienste

Im Juli 2008 gab es fünf Betreiberinnen von Mobilfunknetzen der zweiten Generation, von denen drei ebenfalls ein Mobilfunknetz der dritten Generation betreiben: Swisscom, Sunrise, Orange, Tele2[3] und In&Phone[4]. In den EU-Ländern liegt die Anzahl der Betreiberinnen zwischen zwei (Zypern, Malta und Niederlande) und vier (Schweden, Deutschland, Finnland und Grossbritannien). Die Schweiz steht damit an der Spitze der Rangliste. Eine hohe Anzahl Anbieterinnen allein genügt jedoch nicht immer, um einen effizienten Wettbewerb zu gewährleisten.

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[2] Dieses Phänomen wird in der Verhaltensökonomie ”endowment effect” (Besitztumseffekt) genannt.

[3] Tele2 gab ihre Lizenz im November 2008 infolge der Übernahme aller ihrer Aktivitäten durch Sunrise ab.

[4] In&Phone bietet ihre Dienste ausschliesslich Geschäftskunden an. Aus diesem Grund deckt ihr Mobilfunknetz die Landesfläche nur punktuell ab.

Marktanteile der Mobilfunkbetreiberinnen

Obwohl die Zahl der Akteure auf dem Markt für Mobilfunkdienste im Vergleich zu den Nachbarländern zufriedenstellend ist, weist die Wettbewerbssituation in der Schweiz einige Besonderheiten auf.

Zum einen ist die Schweiz ein Land, in dem der Marktanteil (bezogen auf die Kundenbasis) der historischen Betreiberin vergleichsweise hoch ist. Die Schweiz liegt diesbezüglich unter den verglichenen Ländern an zweiter Stelle nach Zypern (85.2%). Der Marktanteil der Firma Swisscom Mobile beträgt denn auch 61.9%. Dieser Wert ist im Vergleich zum europäischen Durchschnitt von 38.3% sehr hoch. Obschon die Preise der historischen Anbieterin in der Schweiz verglichen mit ihrer Konkurrenz nicht zu den günstigsten gehören, zeigen die Schweizer Kunden ein starkes Interesse an ihren Diensten. Die Aufteilung des Marktes auf die historische Anbieterin und ihre Konkurrentinnen ist ausserdem seit mehreren Jahren unverändert geblieben, dies sowohl in der Schweiz als auch in den EU-Ländern. Der Markt scheint einen gewissen Konsolidierungsgrad erreicht zu haben oder es existiert eine Art Schwelle, welche die alternativen Anbieterinnen bisher nicht überwinden konnten.

Portabilität der Mobilfunknummern

Im Mobilfunkbereich betrug die Zahl der portierten Nummern per 31. Dezember 2007[5] 119'520, was einem Rückgang um 21.1% im Vergleich zum Vorjahr entspricht (151'432). Seit der Einführung dieses wettbewerbsfördernden Instruments (2000) wurden 771'845 Nummern portiert. Der von der historischen Anbieterin in der Schweiz verrechnete Preis von umgerechnet 7.7 Euro liegt zum ersten Mal seit der Einführung im Jahr 2000 unter dem einfachen europäischen Durchschnitt (9.61 Euro).

Mobilfunktarife

Grundsätzlich ist die Nutzung von Mobiltelefonen in der Schweiz teurer als in der Europäischen Union. In den drei analysierten Konsumkörben – für den geringen, mittleren oder grossen Nutzungsbedarf – liegen die Nutzungskosten immer klar über dem europäischen Durchschnitt. Die Kostendifferenz zwischen der Schweiz und der EU variiert zwischen 51% (für den grossen Nutzungsbedarf, Abonnemente und Prepaid-Karten) und 80% (für den geringen Nutzungsbedarf, nur Abonnemente).

Terminierung von Anrufen auf Mobilfunknetzen

Neben den Endkundenpreisen sind auch die Grosshandelsgebühren für die Mobilfunk-terminierung von Interesse. Für jedes Land wurde ein nationaler Durchschnitt auf der Grundlage der Grosshandelspreise vom Oktober 2008 berechnet, der nach der Zahl der Kunden der jeweiligen Anbieterin gewichtet wurde. Betrachtet man die Durchschnittswerte jedes der 28 Länder (einschliesslich der Schweiz), ist ersichtlich, dass die Preise der auf dem Schweizer Markt tätigen Mobilfunkanbieterinnen im Jahr 2008 zu den höchsten in Europa gehören. Nur in der Tschechischen Republik, Polen und Bulgarien sind die Preise höher.

Mit einer gewichteten Terminierungsgebühr von 11.66 Eurocents pro Minute liegt die Schweiz 36.4% über dem gewichteten europäischen Durchschnitt. Trotz der schrittweisen Senkung der Gebühren zwischen 2006 und 2007 (-11.0%) und zwischen 2007 und 2008 (-13.3%) ist nicht zu übersehen, dass der Unterschied zwischen der Schweiz und den EU-Ländern substantiell ist. Daraus lässt sich schliessen, dass der Wettbewerb die Terminierungsgebühren in der Schweiz noch nicht auf das tiefstmögliche Niveau gedrückt hat. Dass das Senkungspotenzial gross ist, zeigt auch die Tatsache, dass die Interkonnektionsgebühr für die Terminierung von Anrufen auf Mobilfunknetzen etwa 10-mal höher ist als die Terminierungsgebühr auf dem nationalen Festnetz. Im Durchschnitt der EU-Länder beträgt dieser Faktor 7.

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[5] Der internationale Vergleich bezieht sich auf den Oktober 2008. Da in der Schweiz die Daten für diesen Monat noch nicht verfügbar sind, wurden die Daten per 31. Dezember 2007 für das Jahr 2008 übernommen.

Die Wettbewerbskommission (Weko) hat die im Vergleich mit der EU hohen Schweizer Mobilfunkterminierungsgebühren bereits im Oktober 2002 zum Anlass genommen, eine Untersuchung gegen die drei nationalen Schweizer Mobilfunkanbieterinnen (Swisscom Mobile, Orange und Sunrise) einzuleiten. Im Februar 2007 hat die Weko eine erste Verfügung für den Zeitraum vom 1. November 2002 bis 31. Mai 2005 erlassen. Sie hat entschieden, dass Swisscom Mobile ihre marktbeherrschende Stellung ausgenutzt hat, indem sie von den Endkunden zu hohe Preise verlangt hat. Swisscom wurde in der Folge eine Sanktion von 333 Millionen Franken auferlegt. Die Beschwerde der Swisscom gegen diesen Entscheid ist zurzeit hängig. Ein weiterer Weko-Entscheid für den Zeitraum ab dem 1. Juni 2005 ist noch ausstehend.

Festnetzmarkt (Kapitel 2)

Marktakteure

Ende 2007 waren beim BAKOM 248 Anbieterinnen registriert, die Sprachtelefoniedienste auf dem Festnetz anbieten können: 2006 hatte ihre Zahl noch 239 betragen, was einer Erhöhung um 3.8% entspricht.

Obwohl die Zahl der Anbieterinnen, welche Dienste der öffentlichen Telefonie anbieten können, erfreulich hoch scheint, sagt sie nichts über den effektiven Wettbewerb aus. In Wirklichkeit handelt es sich bei dieser Zahl um diejenigen Anbieterinnen, die potenziell Dienste bereitstellen können: Nur 75 der 248 Anbieterinnen (30%) sind tatsächlich auf diesem Markt aktiv. Dieser Umstand zeigt, dass es keine einschränkenden administrativen Hürden für den Eintritt in den Schweizer Fernmeldemarkt gibt, während es ungleich schwerer ist, sich im Markt durchzusetzen und langfristig ein entsprechendes Geschäftsfeld aufzubauen. Positiv ist jedoch, dass 2008 drei Anbieterinnen mehr auf dem Festnetzmarkt aktiv waren als im Vorjahr.

Ende 2007 betrug die Zahl der Anbieterinnen auf dem Schweizer Markt für IP-Telefonie 43 (30 im Jahr 2006). Damit gehört die Schweiz in dieser Kategorie zur Spitzengruppe der europäischen Länder (6. Stelle von 25). 85% der IP-Telefonie Anschlüsse werden über CATV gemacht.

Marktanteile der Anbieterinnen von Festnetzdiensten

Der Marktanteil, den die historischen Betreiberinnen im Laufe der Zeit beibehalten konnten, gibt Aufschluss über die Entwicklung und den Stand des Wettbewerbs. Je grösser dieser Anteil ist, desto weniger ist es den alternativen Anbieterinnen gelungen, sich im jeweiligen Markt durchzusetzen. Was die Schweiz betrifft, liegt der Anteil der historischen Anbieterin am gesamten Festnetzmarkt – ausgedrückt in Prozent des Umsatzes – klar unter dem gewichteten Durchschnitt der EU-Länder. So betrug die Differenz zwischen dem Schweizer Wert (59.3%) und dem EU-Wert (64.8%) Ende 2007 über 5 Prozentpunkte. Betrachtet man die Situation in den einzelnen Ländern genauer, stellt man fest, dass die Schweiz gut positioniert ist, da nur die historische Anbieterin Schwedens (57%), Deutschlands (51%) und des Vereinigten Königreichs (58%) einen kleineren Marktanteil haben. Besonders auffallend ist, dass zwischen den EU-Mitgliedstaaten nach wie vor grosse Unterschiede bestehen, da der Marktanteil der historischen Anbieterin zum Teil über 90% beträgt. Aufgrund des zunehmenden Wettbewerbs in der EU ist damit zu rechnen, dass der durchschnittliche Marktanteil der Ex-Monopolistinnen in der EU weiter zurückgehen wird.

In der Schweiz sank der Marktanteil der Swisscom zwischen 2004 und 2007 nur leicht (-1.3 Prozentpunkte), womit die Situation insgesamt gesehen praktisch unverändert geblieben ist. Seit Dezember 2006 ist der Marktanteil sogar wieder steigend.

Betrachtet man die verschiedenen Segmente der öffentlichen Festnetztelefonie, liegen die Anteile der historischen Anbieterin in den Segmenten „Anrufe in Mobilfunknetze“ und „Auslandgespräche“ unter den EU-Durchschnittswerten. Der Anteil der Swisscom an Inlandgesprächen hat zugenommen und liegt somit leicht über dem EU-Durchschnitt. Die grösste Differenz zwischen dem Schweizer und dem EU-Level ist im Segment der Auslandgespräche festzustellen. Swisscom besitzt zwei Prozentpunkte weniger

Marktanteil als der EU-Durchschnitt.

Die unten stehende Tabelle zeigt den Anteil der historischen Anbieterin in der Schweiz bzw. in der EU am ganzen Festnetzmarkt und an den verschiedenen Segmenten dieses Marktes.

	Anteil der historischen Anbieterin in der Schweiz in % des Umsatzes	Anteil der historischen Anbieterin in den EU-Ländern en in % des Umsatzes gewichteter Durchschnitt
Total	**59.3%**	**64.8%**
Segmente		
Inlandgespräche (Orts- und Ferngespräche)	62.3%	61.3%
Auslandgespräche	50.5%	52.5%
Anrufe in Mobilfunknetze	59.6%	60.6%

Wahlmöglichkeiten für die Konsumentinnen und Konsumenten auf dem Festnetzmarkt

Seit der Öffnung des Fernmeldemarktes Ende der 90er-Jahre haben sowohl die Schweizer als auch die europäischen Konsumentinnen und Konsumenten die Möglichkeit, für die Abwicklung von Telefongesprächen zwischen mehreren Anbieterinnen zu wählen.

Dank der raschen Einführung der freien Wahl der Anbieterin (Preselection oder Call-by-Call) können auch in der Schweiz die verschiedenen Angebote am Markt genutzt werden. Der Anteil der Kundschaft, der die Dienste alternativer Anbieterinnen nutzt, ist in der Schweiz schon seit mehreren Jahren grösser als in den EU-Ländern. Zwischen Juli 2007 und Juli 2008 ist dieser Vorsprung jedoch deutlich geschrumpft: Während im Juli 2007 noch 35.8% der Teilnehmerinnen und Teilnehmer eine andere Anbieterin für die Abwicklung ihrer Auslandgespräche wählten, sind es im Juli 2008 nur noch 33.0%. In der EU sind es durchschnittlich 30.9%. Die Schweiz unterscheidet sich folglich nicht mehr signifikant vom EU-Durchschnittswert. Bei den Inlandgesprächen ist der Unterschied gleich stark zurückgegangen: Die Dienste der alternativen Anbieterinnen wurden 2008 von 30.7% (EU 28.7%) der Schweizer Kundschaft genutzt, während es im Jahr 2007 noch 33.6% waren.

Der Anteil der Teilnehmeranschlüsse bei alternativen Anbieterinnen liegt in der Schweiz weit unter dem europäischen Mittel. So beziehen 18.6% der europäischen Teilnehmerinnen und Teilnehmer ihren Anschluss von einer alternativen Anbieterin; in der Schweiz sind es 10%. Dabei handelt es sich vorwiegend um Anschlüsse von Kabelnetzbetreiberinnen. Alternative Anbieter, welche Glasfaser-Anschlüsse anbieten, machen noch immer einen kleinen Teil aus und sind nur in einzelnen geographischen Gebieten tätig.

Der Anteil an Teilnehmeranschlüssen bei alternativen Anbieterinnen ist von 7.8% auf 10.0% gestiegen (EU: von 14.3% und 18.6% gestiegen). Dieser Wert dürfte weiter zunehmen, da die Entbündelung des Teilnehmeranschlusses nach jahrelangen Diskussionen nun seit dem 1. April 2007 auch im Schweizer Recht verankert ist. Im Juli 2007 hatte noch keine Anbieterin Dienste über entbündelte Anschlüsse angeboten. Gegen Ende der zweiten Jahreshälfte 2007 sind erste Angebote am Markt aufgetaucht und dementsprechend gering ist ihr heutiger Anteil am Anschlussmarkt.

Portabilität der Festnetznummern

Gemäss den Angaben per 31. Dezember 2007 wurden im Betrachtungszeitraum 77’879 Festnetznummern portiert, was einer leichten Erhöhung von 1.6% im Vergleich zum Vorjahr entspricht (76’673). In den meisten Fällen wurde ein Vertrag mit einer Kabelnetzbetreiberin abgeschlossen.

In der Schweiz ist der Preis, den die historische Anbieterin von ihren Konkurrentinnen für die Nummernportierung verlangt, in den vergangenen Jahren deutlich gesunken. Dieser Preisrückgang ist auf eine Verfügung der ComCom zurückzuführen, die auf Gesuch der grössten Kabelnetzbetreiberin der Schweiz (Cablecom) erlassen und vom Bundesgericht bestätigt worden ist. Mit einem Betrag von 10.87 Euro exkl.

MWSt lag der Preis für die Portierung von Festnetznummern im Jahr 2008 auf deutlich höherem Niveau als der EU-Durchschnitt von 6.7 Euro, was daran liegt, dass manche europäische Anbieter keinen Preis für diese Dienstleistung verrechnen.

Festnetztarife

Bei der Analyse betreffend Basis-Telefonanschluss (d.h. analoger Anschluss) wurde nach der Monatsgebühr für Haushalte (inkl. MWSt) und für Geschäftskunden (exkl. MWSt) unterschieden, da viele Länder – im Gegensatz zur Schweiz – einen unterschiedlichen Tarif anwenden. Was den Anschlusspreis betrifft, war die Schweiz jahrelang eines der teuersten Länder Europas. Nachdem die meisten EU-Länder ihre Tarife angeglichen haben[6], entspricht der Anschlusspreis, den Schweizer Haushalte bezahlen, heute beinahe dem gewichteten Durchschnitt für die EU (16.1 Euro in der Schweiz vs. 14.7 Euro in der EU). Für Geschäftskunden ist der Preis in der Schweiz um rund 1 Euro tiefer als für private Haushalte, in der EU jedoch verhält es sich genau umgekehrt.

Was die Ortsgespräche betrifft, ist die Schweiz im internationalen Vergleich klar schlechter positioniert. Der Preis für einen Anruf von drei Minuten Dauer ist nur in Belgien, in der Tschechischen Republik und in der Slowakei höher. In Bezug auf den Preis für einen Anruf von zehn Minuten Dauer steht die Schweiz an 23. Stelle, knapp vor Irland, Polen, der Tschechischen Republik, Belgien und der Slowakei. Das schlechte Abschneiden der Schweiz ist darauf zurückzuführen, dass im Frühling 2002 ein einheitlicher Tarif für Inlandgespräche eingeführt wurde, der unabhängig von der Entfernung gilt.

Was die Ferngespräche betrifft, sieht die Lage deutlich besser aus, da der Preis für eine solche Verbindung von drei bzw. zehn Minuten Dauer klar unter dem gewichteten europäischen Durchschnitt liegt (19.2 Eurocents für ein Gespräch von drei Minuten Dauer in der Schweiz vs. 22.7 Eurocents in der EU).

Bei den Auslandgesprächen schliesslich belegt die Schweiz einen hervorragenden Rang. Betrachtet man die Kosten der Warenkörbe, die für internationale Verbindungen definiert wurden (Korb für Haushalte und Korb für Geschäftskunden), können jeweils nur drei historische Anbieter vorteilhaftere Preise vorweisen. Zudem liegen die Schweizer Preise klar unter dem europäischen Schnitt.

Trotz des starken Preisrückgangs in der Schweiz seit der Liberalisierung hat der Wettbewerb noch nicht zu einer vollständigen Angleichung der Verbindungspreise geführt. Vergleicht man die historische Betreiberin mit ihrer wichtigsten Konkurrentin, stellt man fest, dass der Preis für eine nationale Verbindung um 20% (drei Minuten Dauer) bzw. 10% (zehn Minuten Dauer) tiefer liegt. Selbst bei den internationalen Verbindungen, die in der Schweiz bereits extrem günstig sind, können oftmals 13 bis 16% eingespart werden, nicht aber bei Anrufen nach Japan, hierbei ist die alternativen Anbieterinnen um 90% teurer als Swisscom. Je nach Dauer und Verbindungsziel haben viele Schweizer Kundinnen und Kunden noch Einsparungspotentiale durch zahlreiche weitere alternative Anbieterinnen.

Alles in allem war das Niveau der Festnetzpreise in der Schweiz im Jahre 2008 im internationalen Vergleich zufrieden stellend. Mit Ausnahme des Preises für Ortsgespräche lagen die Werte in allen untersuchten Marktsegmenten im Vergleich zum europäischen Durchschnitt auf einem ähnlichen Niveau (z.B. Telefonanschlüsse) oder deutlich darunter (z.B. Anrufe ins Ausland). Dabei ist zu berücksichtigen, dass die Schweiz auf Grund ihres Einheitstarifs für Orts- und Ferngespräche bei der Berechnung der Kosten verschiedener Warenkörbe stark benachteiligt ist. Bei den fünf Körben, welche die OECD[7] definiert hat, belegt die Schweiz meistens die hinteren Ränge im Vergleich mit den Ländern des europäischen Kontinents. Diese ungünstige Klassierung lässt sich teilweise dadurch erklären, dass die Ortsgespräche in der Zusammensetzung der Körbe ein grosses Gewicht haben[8].

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[6] Seit Januar 1995 hat sich die Monatsgebühr für den analogen Anschluss, exkl. MWSt, in der Schweiz nicht verändert.

[7] Körbe für Privatpersonen mit kleinem, mittlerem und grossem Nutzungsbedarf sowie für Selbständige, die zuhause arbeiten, und kleine und mittlere Unternehmen.

[8] Je nach Korb werden zwischen 68% und 77% der nationalen Verbindungen in einem Umkreis von weniger als 10 km hergestellt.

Interkonnektion

In allen Ländern erkannten die Fernmelderegulatoren die wichtige Rolle der Interkonnektion beim Übergang von einer Monopolsituation zu einer echten Marktwirtschaft. Deshalb investierten sie viel Zeit und Energie, um transparente, nicht diskriminierende und kostenorientierte Interkonnektionsgebühren festzusetzen. Dies geschah entweder durch vorgängige Verfahren (sog. Ex-ante-Regulierung) oder durch nachträgliche Verfahren als Reaktion auf ungelöste Konflikte (sog. Ex-post-Regulierung). Wenn sich nun, fast zehn Jahre nach Beginn der Liberalisierung in Europa, die Vorgehensweise in den Verfahren zur Festsetzung der Interkonnektionsgebühren eingespielt hat, heisst das aber nicht, dass dieses Thema nicht mehr aktuell oder vordringlich sei. Denn auf dem Telekommarkt, auf dem man für die Aufnahme einer Tätigkeit grosse Anfangsinvestitionen tätigen muss und neue Technologien regelmässig grosse Umwälzungen bringen (z.B. Aufkommen von Next Generation Networks), dürfen die Regulierungsbehörden ihre Tätigkeit nicht zurückstellen, sondern müssen weiterhin faire Zugangsbedingungen für Marktneulinge gewährleisten. Andernfalls besteht die Gefahr einer erneuten Marktkonzentration.

Nachfolgend wird die Situation in den betrachteten Ländern bezüglich der Terminierung von Anrufen auf dem Festnetz der marktbeherrschenden Anbieterin (zumeist die historische Betreiberin) analysiert. Drei Dienstkategorien werden untersucht: die nationale Interkonnektion (im Fachjargon «double transit»/Doppeltransit), die regionale Interkonnektion («simple transit»/Einfachtransit) und die lokale Interkonnektion, die in der Schweiz jedoch nicht angeboten wird.

Wie in den europäischen Ländern ist auch in der Schweiz zwischen 2005 und 2008 die Gebühr für die Terminierung der nationalen Verbindungen gesunken. Diese lag im Oktober 2008 mit 1.13 Eurocents pro Minute erstmals tiefer als der gewichtete europäische Durchschnitt (1.16 Eurocents). Die Ergebnisse der einzelnen EU-Länder sind allerdings sehr unterschiedlich, da die Gebühren zwischen 0.52 (UK) und 3.07 Eurocents (Bulgarien) variieren. In einer Rangfolge der Länder steht die Schweiz unter den 24 Ländern (inkl. Schweiz) an 9. Stelle, d.h. die Gebühren sind in 15 Ländern höher.

Nachdem im Jahr 2007 die Schweizer Tarife der regionalen Terminierung im gewichteten europäischen Durchschnitt lagen (CH: 0.88, EU: 0.87 Eurocents), steigen sie im Jahr 2008 an, während sie in der EU weiter fallen (CH: 0.91, EU: 0.86). Auch hier ist die Streuung der Beträge der verschiedenen Länder gross. Das Vereinigte Königreich steht mit 0.3 Eurocents an erster und Finnland mit 2.12 Eurocents an letzter Stelle. Die Schweiz liegt an 13. Stelle der insgesamt 27 Länder (EU26 + CH) am Schluss des ersten Drittels der Klassierung.

Die Grosshandelspreise sind in der Schweiz weiterhin Gegenstand von Regulierungsverfahren. Am 17. Dezember 2007 verfügte die Eidgenössische Kommunikationskommission auf Gesuch mehrerer Betreiberinnen hin, dass die Swisscom ihre Festnetz-Interkonnektionspreise für die Jahre 2004, 2005 und 2006 nachträglich senken musste. Gegenwärtig überprüfen die Regulierungsbehörden die von der Swisscom in den Jahren 2007 und 2008 verlangten Preise.

Breitbandzugang und -tarife (Kapitel 3)

Zugang im Grosshandelsmarkt

Am 1. April 2007 trat das revidierte Fernmeldegesetz in Kraft, welches die marktbeherrschende Anbieterin verpflichtet, den übrigen Anbieterinnen den entbündelten Zugang zum Teilnehmeranschluss zu kostenorientierten Preisen zu gewähren. Seither bildet die Schweiz diesbezüglich keine Ausnahme in Europa mehr. Allerdings gibt es in Bezug auf die vorgeschriebenen Zugangsformen einige Unterschiede zwischen der Schweiz und der EU. So ist in der Schweizer Gesetzgebung keine Verpflichtung vorgesehen, den gemeinsamen Zugang («shared access») zum Teilnehmeranschluss bereitzustellen. Der schnelle Bitstromzugang («bitstream access») ist in der Schweiz nur während einer Übergangsfrist von vier Jahren zu gewähren. Durch diese zeitlich beschränkte Verpflichtung wollte der Gesetzgeber die Investitionen in die Festnetzanschlüsse fördern. Die Gesetzgebung in der Schweiz und in der EU unterscheidet sich auch in Bezug auf andere Aspekte des Zugangs. Für die hier vorgenommene Analyse sind diese Abweichungen aber nicht von Belang.

Die Schweiz ist mit der Entbündelung im Vergleich mit der EU um sieben Jahre im Rückstand. Die historische Anbieterin Swisscom hat sich bemüht, nach Inkrafttreten der Gesetzesänderung rasch ein Basisangebot bereitzustellen. Am 31. Juli 2007 wurde die erste Zentrale entbündelt. Im Januar 2009 hatte die Swisscom acht Verträge mit alternativen Betreiberinnen unterzeichnet (also einen weniger als im Januar 2008). Im internationalen Vergleich ist diese Zahl zufrieden stellend, liegt die Schweiz doch damit gleich weit vorne wie beispielsweise Belgien und Ungarn. Die Anfänge der Entbündelung der letzten Meile in der Schweiz sind ermutigend, wenn auch in absoluten Zahlen im internationalen Vergleich noch bescheiden. Ebenfalls bis Januar 2009 waren 31'000 Leitungen effektiv entbündelt worden; das sind im Vergleich zu Januar 2008 29'300 zusätzliche Leitungen. Dieser rasche Aufschwung ist das Ergebnis der weiteren Umrüstungen für die Mitbenutzung der Anlagen, aber auch der von den alternativen Betreiberinnen getätigten Investitionen. Diese Zahl liegt deutlich unter jener von Ländern wie Belgien (61'748), Dänemark (244'631) und Österreich (293'909), sie liegt aber über jener von Irland (17'284), Ungarn (13'022) oder Polen (1'544).

Beim schnellen Bitstromzugang hingegen ist die Situation weniger weit gediehen. Mit der Begründung, sie sei in diesem Bereich nicht marktbeherrschend, verzichtete die Swisscom darauf, ein entsprechendes Basisangebot vorzulegen. Eine alternative Anbieterin ersuchte die Kommunikationskommission (ComCom) in der Folge um eine entsprechende Intervention. Zunächst holte die ComCom bei der Wettbewerbskommission (Weko) eine Beurteilung der Frage der Stellung der Swisscom auf dem betreffenden Markt ein. Da die Swisscom im Gutachten der Weko betreffend den schnellen Bitstromzugang als marktbeherrschend qualifiziert wurde[9], verpflichtete die ComCom die historische Betreiberin im November 2007, den alternativen Fernmeldedienstanbieterinnen einen schnellen Bitstromzugang zu kostenorientierten Preisen bereitzustellen[10]. Gegen diesen Entscheid hat Swisscom beim Bundesverwaltungsgericht Beschwerde eingereicht. Der Entscheid des Verwaltungsgerichts fiel im Februar 2009 und bestätigte die marktbeherrschende Stellung der Swisscom. Folglich ist die Swisscom nun verpflichtet, ihren Konkurrentinnen einen schnellen Bitstromzugang bereitzustellen.

Den alternativen Betreiberinnen, die in der Schweiz Breitbanddienste im Detailhandel anbieten möchten, standen bis zur letzten Gesetzesrevision keine gesetzlich regulierten Zugangsprodukte zur Verfügung. Sie wählten daher in der Vergangenheit häufig die Lösung, einen Wholesale-Dienst der historischen Anbieterin wiederzuverkaufen. Dieser Dienst wird von der Swisscom freiwillig zu von ihr festgelegten Preisen und Modalitäten im Grosshandelsmarkt bereitgestellt. Im Dezember 2008 zählte man im Wiederverkaufsmarkt mit 431'000 Einheiten 7'000 Einheiten weniger als im Vorjahr. Im internationalen Vergleich spielt der Wiederverkauf in der Schweiz eine wichtige Rolle, weisen doch nur zwei Länder – Deutschland und das Vereinigte Königreich – höhere Zahlen aus.

Zugang im Einzelhandelsmarkt

Angesichts ihrer kleinen Fläche hat die Schweiz für EU-Verhältnisse ein bescheidenes Marktvolumen. Mit 2'533'643 Breitbandanschlüssen beträgt ihr Anteil am europäischen Volumen rund 2.2%.

In den EU-Ländern hat die Zahl der Breitbandanschlüsse zwischen Januar 2008 und Januar 2009 um durchschnittlich 15.0% zugenommen. Das Wachstum des Breitbandmarkts in der Schweiz verlief im gleichen Zeitraum etwas bescheidener (9.6%). Die in der Schweiz festgestellte Abflachung der Wachstumsrate ist im Wesentlichen darauf zurückzuführen, dass die Breitbanddienste inzwischen schon stark verbreitet und der Markt reifer geworden sind. Im Januar 2009 konnte sich die Schweiz rühmen, einen Breitband-Versorgungsgrad von 32.9% (gemessen an der Einwohnerzahl) aufzuweisen, womit sie gleich hinter Dänemark (37.3%) und den Niederlanden (36.2%) eine Spitzenposition einnimmt. Diese Werte liegen deutlich über dem europäischen Durchschnitt von 22.9%. So gesehen ist es verständlich, dass die

[9] Das Gutachten kann auf der Website der Wettbewerbskommission eingesehen werden (nur in deutscher Sprache): www.weko.admin.ch.

[10] Vgl. Medienmitteilung der ComCom vom 22. November 2007: www.comcom.admin.ch.

aufholenden Länder stärkere Wachstumsraten verzeichnen.

Von den insgesamt 2'533'643 Breitbandanschlüssen in der Schweiz sind 69.3% DSL– und 28.8% Kabelmodem-Anschlüsse. Weitere Zugangstechnologien[11] spielen in der Schweiz eine untergeordnete Rolle, da sie nur 1.9% der Breitbandanschlüsse ausmachen.

Die Aufteilung zwischen den verschiedenen Anschlusstechnologien ist im Vergleich zum europäischen Schnitt zwar etwas ausgeglichener (79.0% DSL vs. 21.0% andere Technologien in der EU); dennoch verliert die Kabeltechnologie bei den Breitbandanschlüssen in der Schweiz ständig an Boden. Während die beiden Technologien im Juli 2003 gleichauf lagen, ist der Anteil von DSL seither immer grösser geworden: Zwischen Januar 2008 und Januar 2009 ist die Zahl der DSL-Anschlüsse um 9.6%, jene der Kabelmodem-Anschlüsse nahm um 2.8% zu. Diese Entwicklung ist jedoch nicht nur in der Schweiz, sondern auch in den meisten EU-Ländern zu beobachten. Grund dafür ist wahrscheinlich, dass die DSL-Technologie meistens auf dem Festnetz der historischen Betreiberin aufbaut, während alternative Technologien von zahlreichen Betreiberinnen entwickelt werden müssen, die im Allgemeinen über weniger ausgedehnte Netze verfügen. So wird in der Schweiz die DSL-Technologie hauptsächlich von Swisscom kontrolliert, während schnelle Internet-Anschlüsse über Kabelmodem von gut fünfzig Betreiberinnen angeboten werden, darunter Cablecom als grösste Firma. Die historische Betreiberin verfügt also dank der Bereitstellung der Telefonanschlüsse über ein landesweites Netz und eine grosse Kundenbasis, wodurch sie in Bezug auf die Flächenabdeckung und die Rentabilisierung des Marketingaufwands Vorteile hat. Im Übrigen agieren die Betreiberinnen, welche das Wholesale-Produkt der Swisscom wiederverkaufen, relativ offensiv am Markt.

Betrachtet man die Aufteilung des Endkundenmarktes zwischen der historischen Betreiberin (oder ihrer Tochtergesellschaft) und den Marktneulingen, stellt man fest, dass die Situation in der Schweiz ähnlich wie in den EU-Ländern aussieht. So wurden den Endkunden im Januar 2009 52.3% der Breitbandanschlüsse direkt von der Tochtergesellschaft der historischen Betreiberin, Bluewin, angeboten, während in der EU durchschnittlich 46.0% der Breitbandanschlüsse von der historischen Anbieterin stammen. Dieses auf den ersten Blick ausgeglichene Verhältnis ist allerdings zu relativieren. Der Marktanteil der historischen Anbieterin in der Schweiz ist nämlich im Laufe der Jahre ständig gewachsen (50.3% im Januar 2008, 46.2% im Januar 2007 verglichen mit 28% im Jahr 2003), und die meisten Anbieterinnen von Internet-Diensten über die DSL-Technologie beschränken sich darauf, einen Dienst der historischen Anbieterin wiederzuverkaufen; dadurch haben sie nur bescheidene Möglichkeiten, in die Wertschöpfungskette einzugreifen. Zählt man zu den Breitbandanschlüssen, die den Endkunden direkt von Bluewin angeboten werden, die DSL-Anschlüsse hinzu, die auf dem Grosshandelsmarkt verkauft werden, ergibt sich ein Anteil der historischen Anbieterin am Breitbandmarkt von insgesamt 69.3%. Führt man die gleiche Berechnung für die EU-Länder durch, steigt der Anteil der historischen Anbieterin nur in drei Fällen (Deutschland, Luxemburg, Vereinigtes Königreich) um mehr als 10 Prozentpunkte. Ausserdem hat sich die Situation für die alternativen Anbieterinnen verschlechtert, ist doch ihr Anteil auf dem Markt für DSL-Anschlüsse von 27.3% im Januar 2008 auf 24.5% im Januar 2009 zurückgegangen. Die Umsetzung der Entbündelung scheint hier noch keine echte Trendwende zu bewirken.

Entbündelungspreis

Im Oktober 2008 betrugen die monatlichen Kosten einer entbündelten Leitung durchschnittlich 12.4 Euro. Damit lagen die Preise in der Schweiz über dem europäischen Durchschnitt (10.9 Euro). Analog zur Entwicklung in den EU-Ländern gerät der Entbündelungspreis stark unter Druck. Im zweiten Halbjahr 2007 ersuchten mehrere Anbieterinnen die ComCom unter anderem um Erlass einer Verfügung zu den Entbündelungspreisen. Die Regulierungsbehörden haben diese Gesuche behandelt und insbesondere geprüft, ob die Preise der Swisscom kostenorientiert sind. Im März 2008 hat die Swisscom den Entbündelungspreis für eine Teilnehmeranschlussleitung von sich aus rückwirkend per 1. Januar 2008 gesenkt[12] (von 31 auf 23.50 Franken). Im September 2008 legte die Eidgenössische Kommunikations-

[11] Zum Beispiel Satellit, Glasfaser, PLC, Mietleitungen, 3G-Mobilfunk usw.

[12] Vgl. Medienmitteilung der Swisscom vom 17. März 2008: www.swisscom.ch.

kommission zum ersten Mal den Entbündelungspreis für die Letzte Meile fest. Sie setzte ihn auf 18.18 Franken für 2008 und auf 16.92 Franken für 2007 fest. Die Swisscom reichte keine Beschwerde gegen diese Entscheide ein. Die 2008 von der Swisscom verrechneten 12,4 Euro machen die Schweiz zwar zum fünftteuersten Land nach Irland (17.7), Finnland (14.7), Luxemburg (13.3) und der Tschechischen Republik (13.0), insgesamt lag sie damit aber nur leicht über dem EU-Durchschnitt.

Die erwähnten monatlichen Durchschnittskosten (12.4 Euro) umfassen einen über drei Jahre amortisierten Pauschalbetrag für die Übernahme der Leitung[13] und den für die Miete der Leitung verlangten monatlichen Preis. Die in der Schweiz bislang geforderte Pauschale liegt unter dem europäischen Durchschnitt (28.9 Euro im Oktober 2008 gegenüber 57.5 Euro in der EU). In den EU-Ländern bewegt sich dieser Preis zwischen 13.8 Euro (Niederlande) und 139.3 Euro (Lettland). Hingegen lag der ursprünglich von Swisscom geltend gemachte monatliche Preis für die Miete einer entbündelten Leitung in der Schweiz mit 11.62 Euro 25% über dem europäischen Durchschnitt (9.28 Euro). Dieser befand sich im Oktober 2008 in den EU-Ländern zwischen 6.33 Euro (Estland) und 16.43 Euro (Irland). Durch die von der ComCom beschlossene Preissenkung im September 2008 konnte dieser grosse Unterschied im Vergleich zu den EU-Ländern jedoch zu einem grossen Teil ausgeglichen werden.

Konvergenz der Dienste – Bündelangebote (Kapitel 4)

Erstmals analysiert die Europäische Union in ihrem Implementierungsbericht die Bedeutung der Bündelangebote auf dem Markt für Fernmeldedienste.

Die erhobenen Zahlen sind weitgehend von der Definition des Begriffs Bündelangebot abhängig. In diesem Bericht versteht man unter Bündelangebot ein Angebot, das mindestens zwei Dienste umfasst und von einer einzigen Anbieterin zu einem Einheitspreis über eine einzige Rechnung vertrieben wird.

In der Schweiz spielen Bündelangebote gemäss oben stehender Definition auf dem Markt noch eine relativ unbedeutende Rolle. In den meisten Fällen werden sie von lokalen Anbieterinnen vermarktet. Die landesweit tätigen grossen Betreiberinnen gewähren Kunden, die zwei oder mehr der separat verkauften Produkte kombinieren, eher Rabatte oder zeitlich begrenzte Aktionen.

Ende 2007 lag der Anteil der Schweizer Abonnentinnen und Abonnenten, die Bündelangebote (zwei Dienste oder mehr) nutzen, bei 5.7% der Bevölkerung. Dieser Anteil lässt sich in zwei Gruppen unterteilen: 4.6% der Bevölkerung greifen auf «Double Play»-Angebote (hauptsächlich Festnetztelefonie in Kombination mit Breitband-Internet) zurück, und 1.1% nutzen «Triple Play»-Angebote (mehrheitlich Festnetztelefonie in Kombination mit Breitband-Internet und Fernsehen). Es wurde kein «Quadruple Play»-Angebot gemeldet. Sechzehn Betreiberinnen bieten «Double Play»- und acht «Triple Play»-Produkte. Im Vergleich mit den Zahlen anderer europäischer Länder liegt die Schweiz im Mittelfeld. Es ist auch festzustellen, dass die Unterschiede zwischen den europäischen Ländern bedeutend sind.

Rundfunk (Kapitel 5)

Für die Schweiz ist nur der Indikator Anzahl Fernsehanschlüsse je 100 Einwohner verfügbar. Da der Wert für die Schweiz auf Basis einer Kombination von Schätzungen verschiedener Quellen mit unterschiedlichen Erhebungsmethoden ermittelt wurde, ist bei der Interpretation dieses Indikators Vorsicht geboten.

Vor diesem Hintergrund gibt es in der Schweiz rund 48 Fernsehanschlüsse je 100 Einwohner. Damit befindet sich die Schweiz in der oberen Hälfte der am besten abgedeckten europäischen Länder, in etwa auf demselben Niveau wie Frankreich, Italien, Portugal und Finnland.

[13] Dabei handelt es sich um eine bereits aktive Leitung.

Am weitesten verbreitet sind Kabelanschlüsse: 39 Einwohner von 100 besitzen einen solchen. Dahinter folgen mit grossem Abstand die Satellitenverbindungen (4.1 Einwohner von 100) sowie die analogen oder digitalen Antennen (3.0 Einwohner von 100). An letzter Stelle findet man mit 1.2 Einwohnern je 100 die IPTV-Verbindungen.

Mangels Informationen fehlt dieses Kapitel in diesem Bericht. Hingegen sind die Daten der EU-Länder im 14. Implementierungsbericht der EU (März 2009) ersichtlich.

Einzelhandelspreise für Mietleitungen (Kapitel 6)

Was das Mietleitungsangebot im Endkundenmarkt betrifft, ist dieses in der Schweiz äusserst intransparent. Neben Swisscom, die höchstwahrscheinlich die einzige Anbieterin mit einer nationalen Abdeckung ist, gibt es nur sehr wenige Akteure auf diesem Markt. Meistens wurde der Preis, der zwischen der Betreiberin und dem Endkunden in Rechnung gestellt wird, direkt ausgehandelt; er kann deshalb von Fall zu Fall stark variieren. So sind die spärlichen Informationen, die man dennoch in Erfahrung bringen konnte, kaum repräsentativ. Mangels Informationen fehlt dieses Kapitel im vorliegenden Bericht.

Was den Grosshandelsmarkt für Mietleitungen betrifft, ist festzuhalten, dass derzeit bei der Regulierungsbehörde mehrere Verfahren eingeleitet werden, um die Zugangspreise auf diesem Markt zu bestimmen.

ANNEX 2
MARKET OVERVIEW

Methodological note

The main sources for the data presented in this Annex are National Regulatory Authorities (NRAs), exceptions are noted. A validation meeting with representatives from NRAs took place in November 2008. Furthermore, draft versions of the charts in this annex (excluding data on tariffs) were distributed to the NRAs before this report was finalised for their comments.

The source for the population figures is Eurostat.

The source for the exchange rates is the European Central Bank. Prices are portrayed in euros in current prices. Purchase power parity methodology is, in principle, not used for the specific objective of this Report. In each Report figures from previous years are revised, therefore the figure for a certain date may diverge from previous Reports.

Precisely:

Figures about the market in sections 1 (mobile interconnection, mobile operators, mobile number portability), 2 (fixed market, fixed number portability), 3 (prices for LLU), 4 (bundled offers), and 5 (broadcasting) were provided by the National Regulatory Authorities (NRAs) in response to a questionnaire on regulatory market data sent by the Commission in July 2008. Data on mobile subscribers (section 1) refer to October 2008 and come from the NRAs unless otherwise specified.

Data in section 3 on broadband access are provided by the NRAs and the national ministries through the Electronic Communications Committee (COCOM). Data have been collected from July 2002 to July 2007 three times a year, in January, June and October, whereas from July 2007 onwards they will be collected in January and July only. The latest figures in this report refer to 1 January 2009 unless otherwise specified.

Price information in sections 1 (mobile tariffs), 2 (PSTN tariffs) and 6 (retail leased lines prices) is taken from a study carried out for the Commission by Teligen, Strategy Analitics Ltd. These data are collected from primary sources (i.e. directly from the incumbent operators and new entrants) and checked by the NRAs.

Contents

List of Figures

Chapter 1

Mobile market

This section provides information on the number of mobile subscribers and the penetration rate for mobile telephony services. It also shows the number of both mobile network operators and mobile service providers as well as the market share of the main players in each Member State and in Switzerland.

1.1 Mobile penetration

This section provides information on the number of mobile subscribers and the penetration rate for mobile telephony services in each Member State. The growth in the penetration rate since October 2004 is also shown.

Where available, data have been provided by the National Regulatory Authorities (NRAs).

The EU average is a weighted average by the number of subscribers.

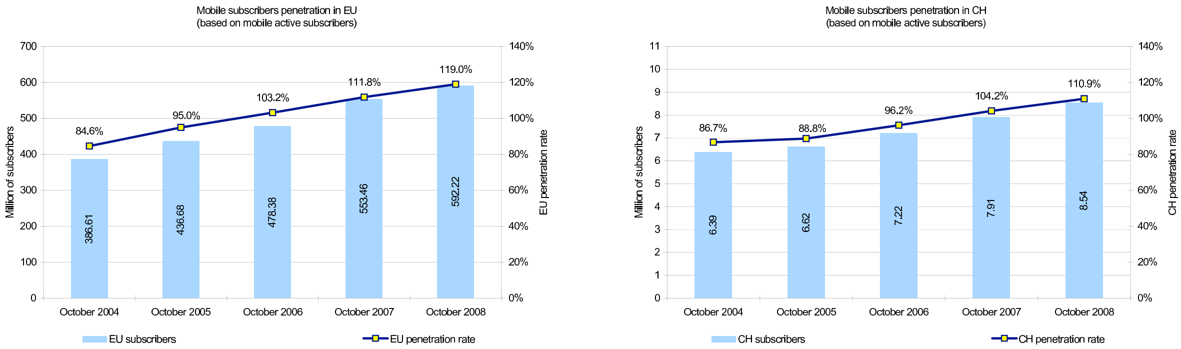
It should be noted that operators and regulators use different methods to count the number of subscribers. Some regulators distinguish between the overall number of mobile subscribers and the number of active subscribers. The table indicates where this information is available. Some operators consider the total number of users that have made or received a call or sent an SMS in the last 9 or 6 months, whereas others only consider the active users of the last 3 months. This has an impact on the penetration rate, especially in small countries.

The chart below displays the number of mobile subscribers in the EU between 2004 and 2008. In October 2008 there were around 592.22 million mobile subscribers, with an increase of around 40 million since October 2007 (+7%). Penetration rate is 119% of EU population (+7.2 percentage points since last year).

Figure 3b shows the evolution in the mobile telephony market in Switzerland. In the period between October 2007 and October 2008 we note an increase of about 630,000 in the number of mobile subscriptions (7.96%). The growth of the penetration rate in the same period was about 6.7 percentage points.

The mobile telephony penetration rate in Switzerland, at 110.9%, is 8.1 percentage points lower than the average for the European Union countries (119.0%). We note that between 2006 and 2007, Switzerland broke through the 100% barrier (see Figure 4).

Figure 3



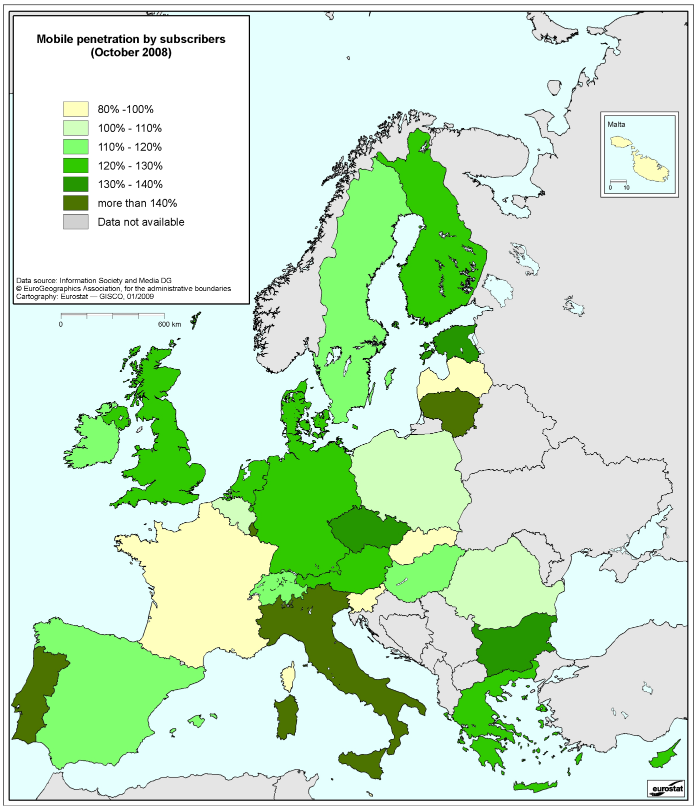
(a) (b)

Data include 2G and 3G mobile network operators' subscribers as well as mobile service providers' subscribers. Data are not comparable with previous reports (updated figures for previous years have been provided by some NRAs).
Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

The following map shows the mobile penetration rate in the EU countries and the next chart shows the absolute number of mobile subscribers in each Member States (columns) and the penetration rate (dots), measured as the number of subscribers per 100 inhabitants. Where available, figures include 2G and 3G subscribers for both mobile network operators and mobile service providers.

Penetration rate is above 100% in 23 Member States; Italy (152%), Lithuania (149%) and Luxembourg (142%) have the highest values.

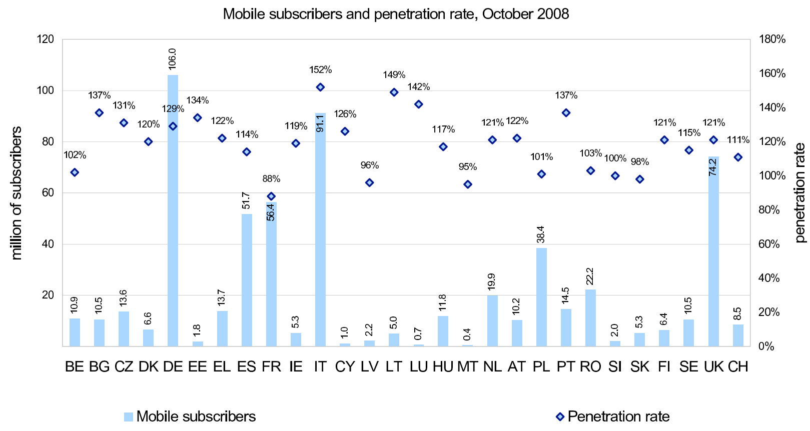
Figure 4



Austria: numbers as of 30.06.2008.
Finland: amount of subscriptions on 30 June.2008.
United Kingdom: Data as of July 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

Measured in terms of consumers, the largest markets are in Germany, Italy and the United Kingdom. Switzerland, with its 8.5 million users, belongs to the group of countries characterized by a low volume of users in absolute terms.

Figure 5

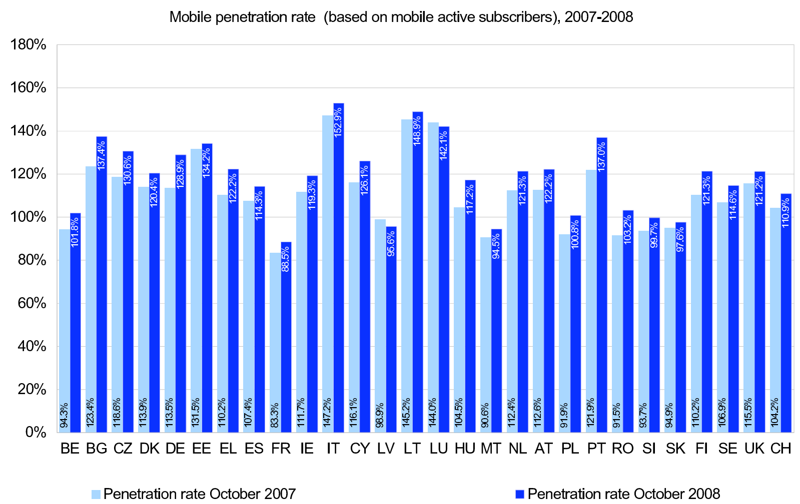


Austria: numbers as of 30.06.2008.
Finland: amount of subscriptions on 30 June.2008.
United Kingdom: Data as of July 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

The following chart displays for each Member State the growth of the mobile penetration rate between October 2007 and October 2008, unless otherwise indicated. Penetration rate has grown significantly in Germany (+15 percentage points), Portugal (+15 percentage points), and Bulgaria (around +14 percentage points).

Between October 2007 and October 2008, the mobile telephony penetration rate in Switzerland grew from 104.2% to 110.9%, a 6.7 percentage point increase. Growth is therefore being maintained, as was the case between 2006 and 2007.

Figure 6

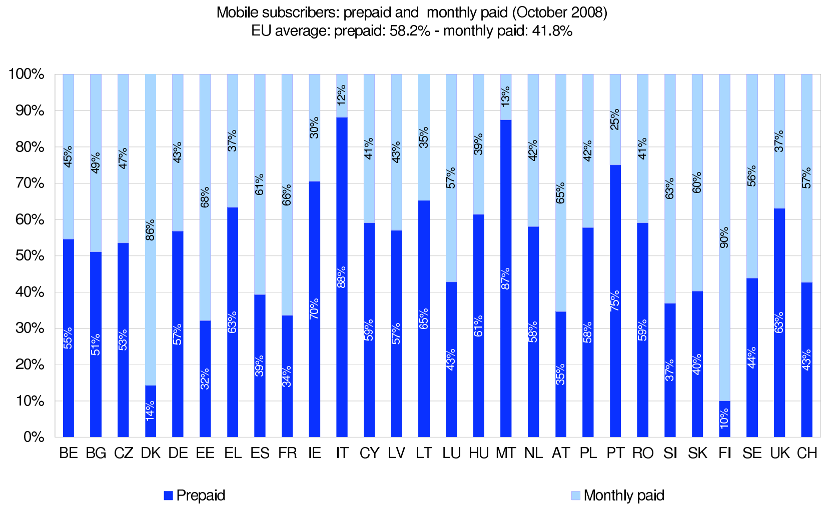


Austria: numbers as of 30.06.2008.
Finland: amount of subscriptions on 30.6.2008.
United Kingdom: Data as of July 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

The following chart shows, for each Member State split between post-paid and pre-paid subscribers. At EU level, 58.2% of subscribers use a pre-paid system. In Italy and Malta, the number of subscribers using pre-paid services is above 85%.

In Switzerland, 42.7% of subscribers had chosen the pre-paid system at the data collection date as against 58.2% on average in the European Union countries. The difference is therefore considerable.

Figure 7



Austria: numbers as of 30.06.2008.
Finland: amount of subscriptions on 30.6.2008.
United Kingdom: Data as of July 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

1.2 Players in the mobile market

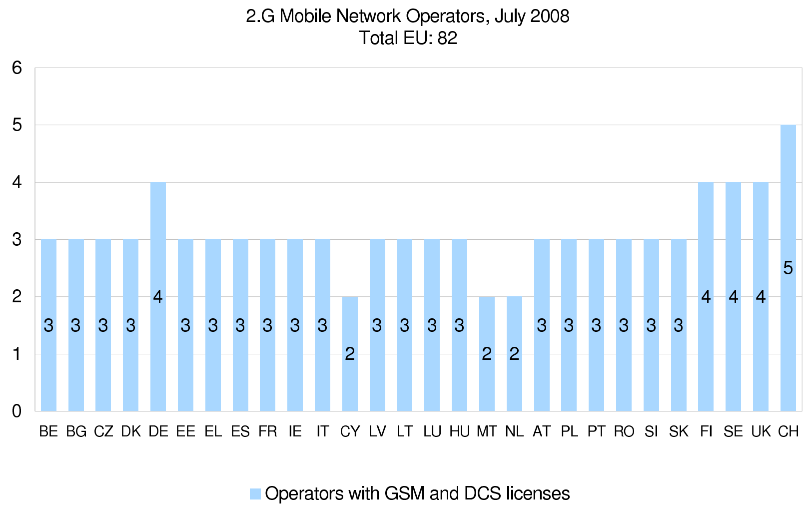
This section shows the number of mobile licenses granted in each Member State for the provision of mobile services (2G/3G mobile network operators and mobile service providers). License for analogue mobile service are not phased out in Poland (phasing out: 17-12-2016).

Data have been provided by the national regulatory authorities and refer to the situation in July 2008.

The following chart shows the number of mobile network operators licensed to provide digital mobile services (second- generation). The number of operators indicates the real magnitude of the choice of operators for customers of digital mobile services, since very often operators have licences for both GSM 900 and DCS 1800. Mobile network operators have been identified as having only GSM 900 or only DCS 1800 frequencies, or both (in which case they have usually been granted a GSM 900 licence which has subsequently been extended to the DCS 1800 band).

In Switzerland, five providers were operating a second-generation mobile network in July 2008 – Swisscom Mobile, Sunrise, Orange, InPhone and Tele2. In September 2008, Sunrise announced the takeover of Tele2 (Tele2 surrendered its licence to OFCOM Switzerland in November 2008).

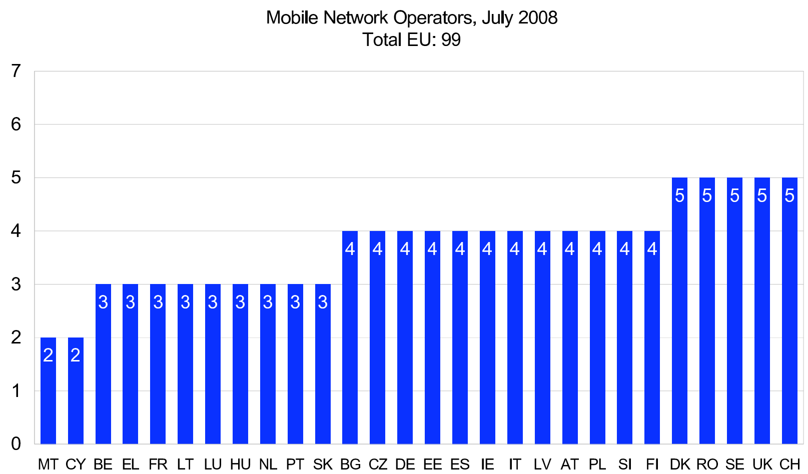
Figure 8



France: Mobile national operators for mainland France only. Overseas departments are excluded.
Source for Switzerland: OFCOM Switzerland

In all, five operators were operating a mobile network in Switzerland in July 2008. These are the same operators mentioned in the comments on Figure 8; some of them also possessed a UMTS licence as well. If we consider Figure 9, we can see that in all the countries considered, the number of operators with frequencies available and operating a network varies between two (Belgium and Bulgaria) and five (Slovakia, Finland, Sweden, United Kingdom and Switzerland). Therefore, in an international comparison, Switzerland has a high number of operators with a mobile network.

Figure 9



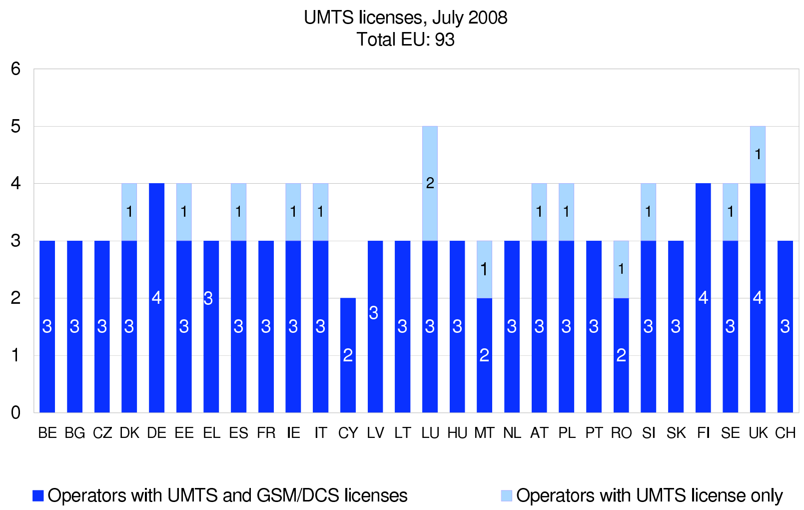
Source for Switzerland: OFCOM Switzerland

The following two figures indicate the number of UMTS licenses granted in each Member State and the status of the launch of 3G services: trial (tests with a closed group of selected users) or commercial (fully commercial services open to any users at standard tariffs).

In December 2000, the Communications Commission awarded four UMTS licenses to Swisscom Mobile, Orange, TDC Switzerland (cf. Sunrise) and 3G Mobile (Telefonica), which was considered to be a new entrant. On the data collection date (July 2008), three of them were offering fully commercial UMTS services to Swiss consumers. These are Swisscom Mobile, TDC Switzerland (cf. Sunrise), and Orange.

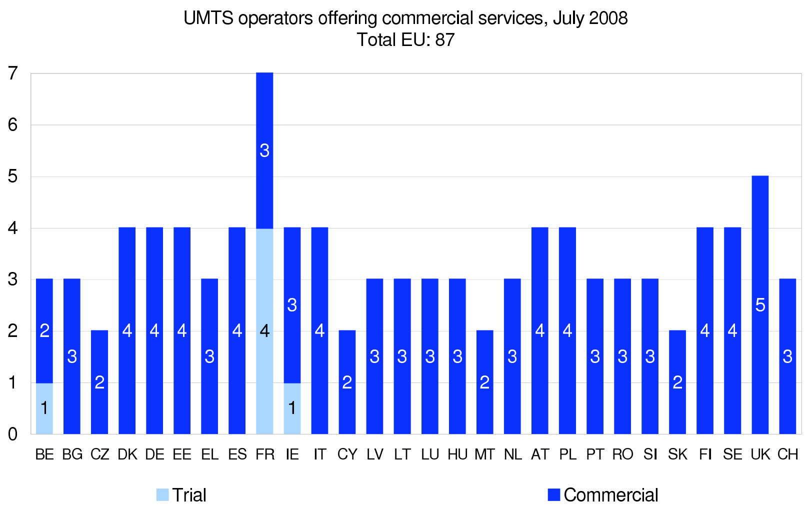
Swiss UMTS operators were obliged by their license conditions to achieve 3G network population coverage of 50% in the country before the end of 2004. 3G Mobile (Telefonica) did not meet this condition. In March 2006, the Federal Communications Commission revoked Telefonica's UMTS license. This measure was forced on the Commission as 3G Mobile was not utilizing its licence and was not fulfilling the coverage conditions.

Figure 10



Source for Switzerland: OFCOM Switzerland

Figure 11



Source for Switzerland: OFCOM Switzerland

1.3 Mobile operators' market share

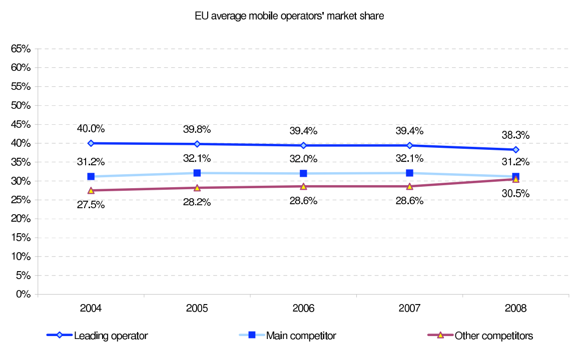
The following charts present the market shares, based on subscribers, of the leading operator, the main competitor and the other competitors in the mobile market. Operators' market shares have been calculated for the overall mobile market (including DCS 1800/GSM 900 and UMTS subscribers).

Data concerning market shares are based on the data supplied by the NRAs except for where they are confidential (Czech Republic, Denmark, Estonia, Greece, Luxembourg, Hungary, Slovenia, Portugal and Finland). Data for these countries are estimates from European Mobile Communications and refer to 3Q 2008.

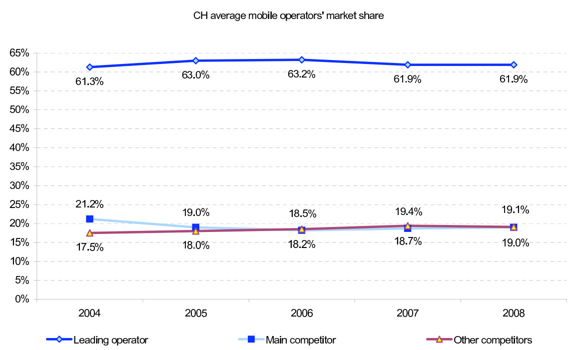
In Cyprus, one operator largely dominates the market with more than 85% market share. In Slovenia, the leading operator retains more than 60% of the market. In 15 Member States the leading operators have market shares between 40% and 55%. The lowest market share of the leading operator is in the United Kingdom (25%). EU average has been weighted using mobile subscribers for each country. At EU level, the market share of the leading operator and its competitors decreased on average compared to 2007.

After Cyprus only, Switzerland ranks for the country in which the subsidiary of the historic operator has the largest market share. This rate, 61.9%, is well above the European average (38.3%). It must be stated that the situation is not radically different from that prevailing in 2004. As a result, only a relatively small share is distributed between the historic operator's main rival (19.0% percent market share) and the other competitors (19.1%).

Figure 12



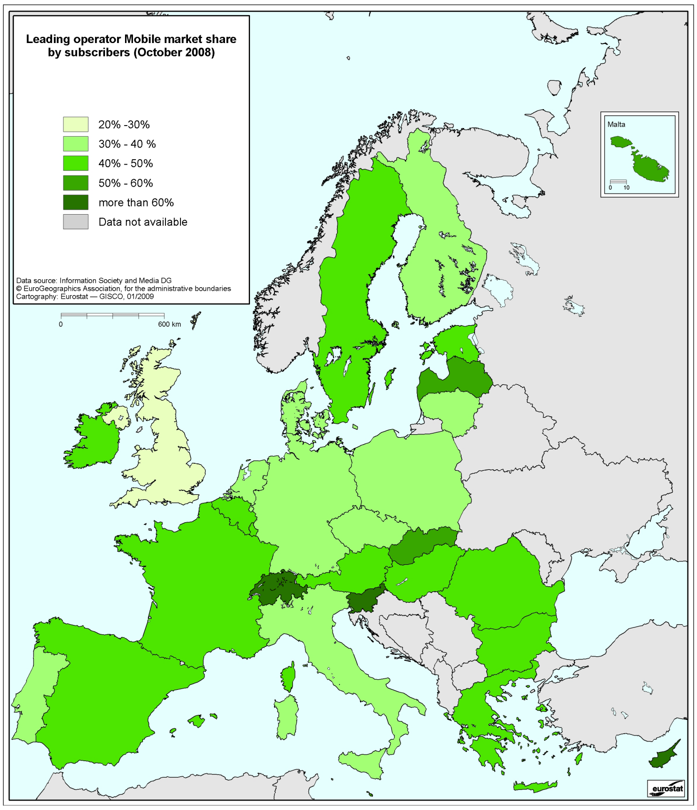
(a)



(b)

Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

Figure 13

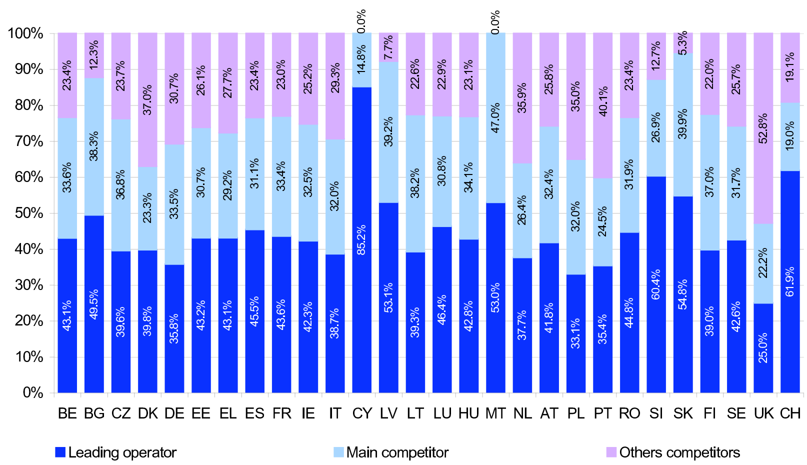


Data for Czech Republic, Estonia, Greece, Luxembourg, Hungary, Austria, Portugal and Romania are confidential. Data for these countries are estimates from European Mobile Communication 2007 except and Greece (Source: Incumbent web-site). Data for Estonia not available.

Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

Figure 14

Mobile market share based on subscribers, October 2008



Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

1.4 Mobile number portability

Mobile number portability enables mobile subscribers to retain their number when they move from one operator to another.

Figures refer to the number of transactions calculated up to 1st October each year, unless stated otherwise under each table.

According to the data at our disposal for 25 countries, the mobile ported numbers have increased during the past period (+14.1million) and as of October 2008 almost 60.7 million subscribers have ported their number since the introduction of this possibility.

The percentage of ported numbers in the EU over the total mobile subscribers since the introduction of mobile number portability is now 10.3%.

Spain and Italy continue to lead in terms of the number of subscribers that have ported their numbers (above 18 million).

Finland has the highest percentage of ported numbers over the total of mobile subscribers (68.7%) followed by Denmark (39.97%) and then Spain (35.45%).

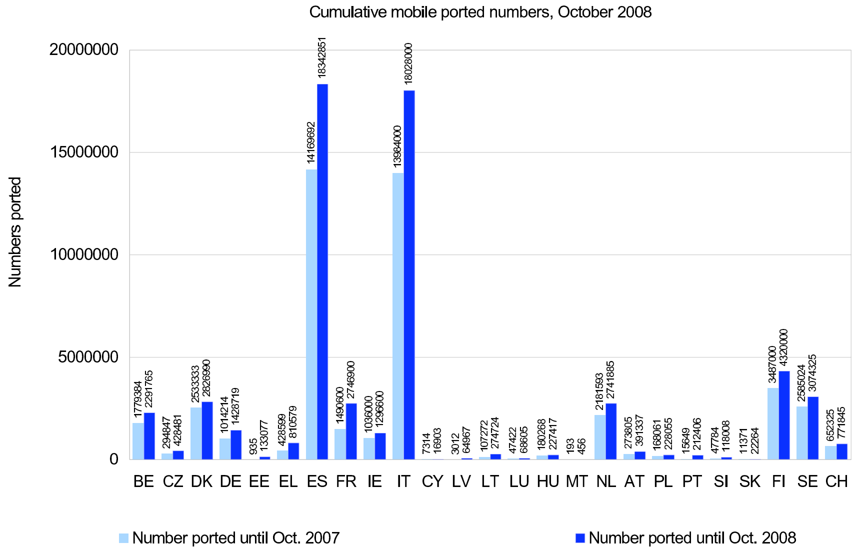
In Estonia, Spain and Lithuania there is no inter-operator charge for the porting of mobile numbers.

Mobile telephone number porting was introduced in Switzerland in 2000. During 2002 some 118,113 numbers were ported. This represents a maximum annual value since the introduction of the service. During the period 2002-2004, a decrease of 44% in porting demand was recorded. This case is unique in Europe. In 2005 an increased interest in the use of this service was recorded, with 99,072 mobile users retaining their number when switching operator. This trend continued in 2006, with 151,432 numbers ported. In 2007, the trend reversed direction. Only 119,520 numbers were ported, representing a reduction of 21.1% compared to 2006. Since the introduction of this competition promoting instrument in 2000, 771,845 numbers have been ported. The proportion of ported numbers represents 1.5% of the total number of mobile telephony subscriptions in 2007. This rate is well below the European simple average (13.4%); this is partially explained by the fact that Swiss users change their operator relatively infrequently.

The Swiss incumbent operator charges 7.7 Euros per mobile number ported, putting Switzerland for the first time below the European simple average (9.61 Euros).

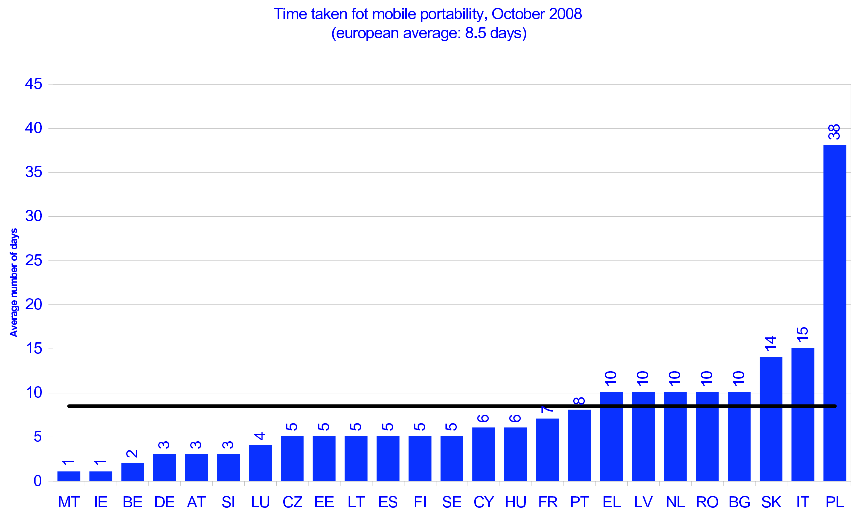
It should be noted that data on the average number of days required to transfer numbers between operators operating mobile networks is not available.

Figure 15



(a)

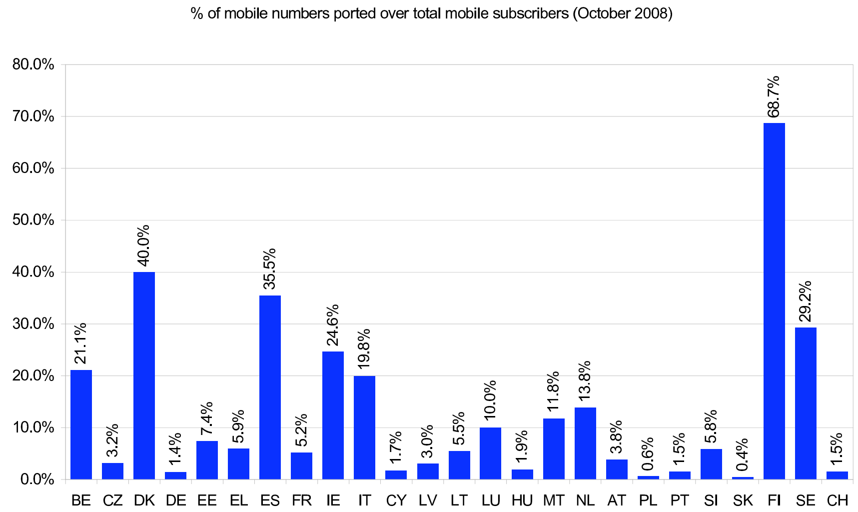
Romania: fixed mobile number portability available starting with 21st October 2008; the maximum regulated number of days for fixed portability is 10.
Source for Switzerland: OFCOM Switzerland calculations. The October 2007 and 2008 data refer respectively to December 2006 and 2007.



(b)

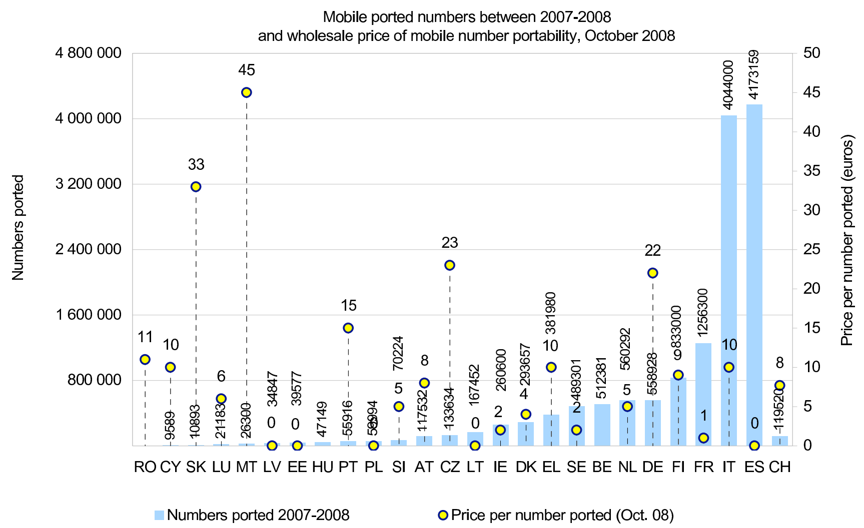
Romania: fixed mobile number portability available starting with 21st October 2008; the maximum regulated number of days for fixed portability is 10.
Source for Switzerland: data not available.

Figure 16



(a)

Romania: fixed mobile number portability available starting with 21st October 2008; the maximum regulated number of days for fixed portability is 10.
Source for Switzerland: OFCOM Switzerland calculations



(b)

Belgium: Subject legal case.
Bulgaria: Data not available.
Poland: Data on prices not available.
Romania: Mobile ported numbers not available yet; fixed mobile number portability is operational starting with 21st October 2008; the maximum regulated tariff is 11Euro/mobile number ported.
Source for Switzerland: OFCOM Switzerland, Swisscom

1.5 Mobile tariffs

1. The analysis of national (as opposed to roaming) mobile services is based on the OECD baskets for digital mobile services. OECD baskets have undergone a revision that resulted in a new set of baskets at the beginning of 2006, as opossed to old 2002 OECD baskets. Mobile baskets have been updated with current traffic weights and volumes. The changes are significant enough to prohibit the use of the new baskets with old data.

The baskets contain an SMS element, they include calls to several mobile networks, and they do not cover international calls. In addition, MMS element is included in the basket, while both MMS and SMS are separated for peak and off-peak times, and on-net and off-net destinations. Also, voicemail is included in the baskets, whereas off-net calls can be directed to several networks. There are 3 different baskets, based on low, medium and high usage levels. All packages analysed in this study are Post-Paid packages. Some of the main properties of the ”2006 OECD” baskets are:

- Low usage basket with:
  30 outgoing calls per month + 33 SMS messages
  22% of calls are to fixed line phones, 70% to mobile phones, 8% to voicemail
- Medium usage basket with:
  65 outgoing calls per month + 50 SMS messages
  21% of calls are to fixed line phones, 72% to mobile phones, 7% to voicemail
- High usage basket with:
  140 outgoing calls per month + 55 SMS messages
  20% of calls are to fixed line phones, 73% to mobile phones, 7% to voicemail

Each basket also has a unique definition of time of day distribution and call duration, and includes the monthly rental, and any registration charges distributed over 3 years.

The two most prominent operators in each country are covered, based on available subscriber numbers (except for Switzerland - the 3 most prominent = Swisscom, Sunrise and Orange). All relevant packages from each operator are considered, but the final results presented here only show the cheapest package for each basket.

The asterisk (*) behind the package name means that the package name and its structure have changed between 2007 and 2008. The package chosen at any time is the cheapest package from that provider for the usage profile in question. This may give rise to significant price changes over time.

The balance of fixed and usage in the mobile baskets varies considerably between countries, as the preferred packages in some countries contain a lot of calling time included in the fixed charge.

A full description of the methodology can be found at the end of this report.

The names of the tariff packages used in the basket analysis are found in the table below.

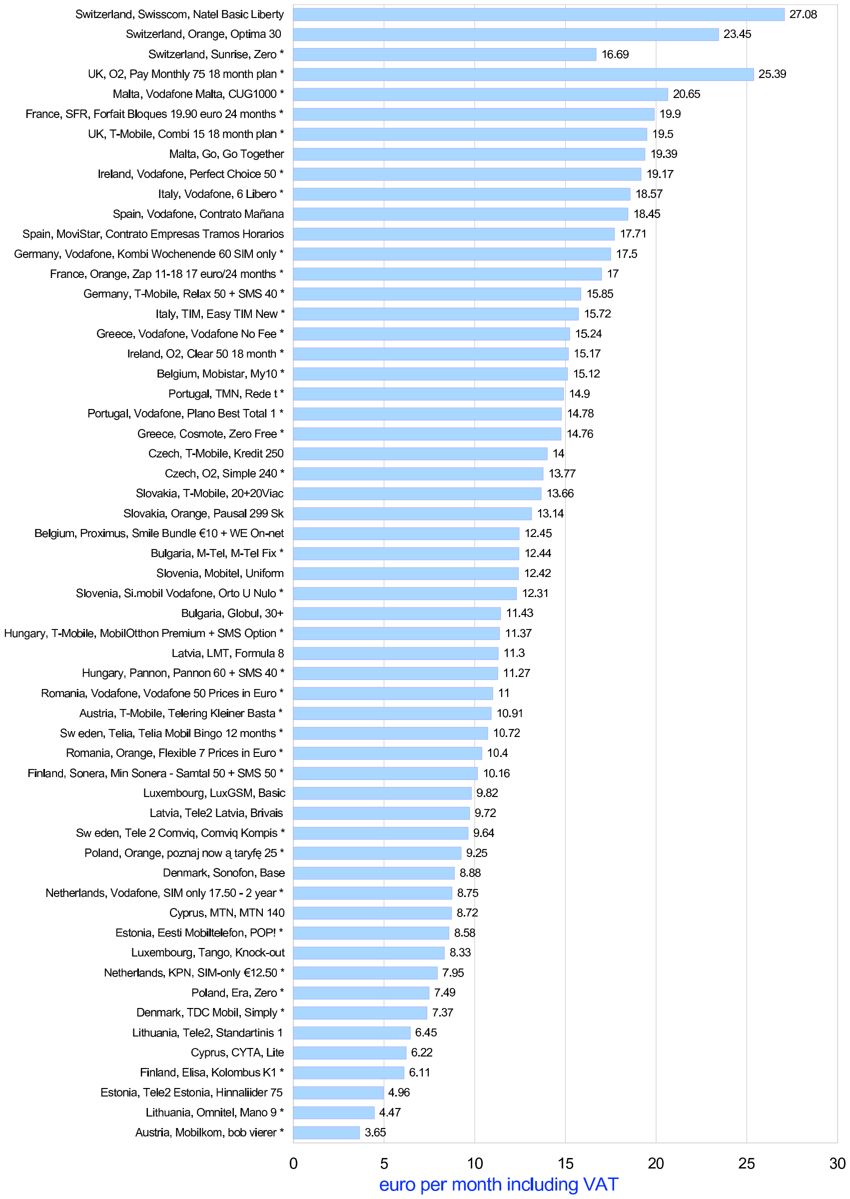
2. In order to show a price trend, the ”2006 OECD” baskets have been used. Mobile services from 2007 till 2008 are used. The graphs will show the average price developments for the EU countries, using a simple average across all member countries per year. The averages cover the cheapest package from the same mobile operators.

   From 2007, Bulgaria and Romania are also included.

1.5.1 2006 OECD baskets

Figure 17

Low usage basket post-paid (2008)

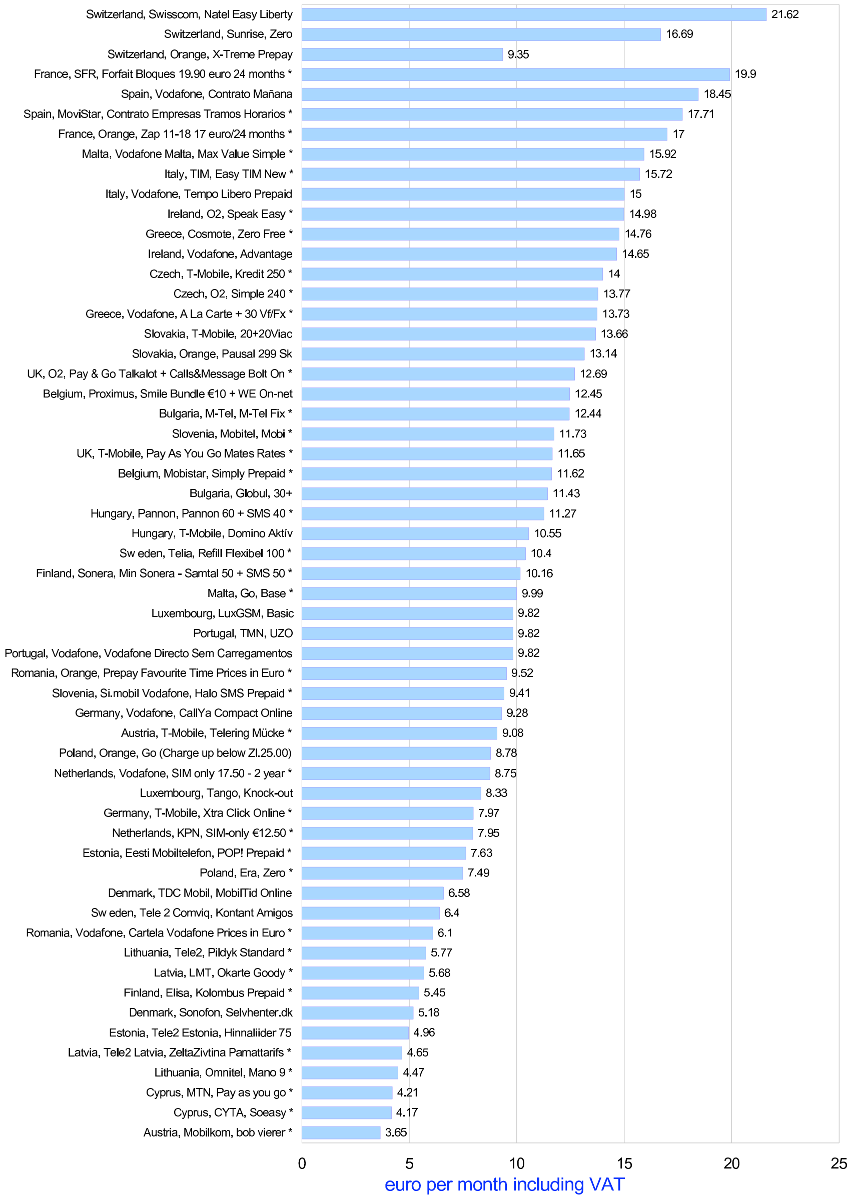


Entries with an asterisk (*) after the name have changed the package name and structure since last year

Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Figure 18

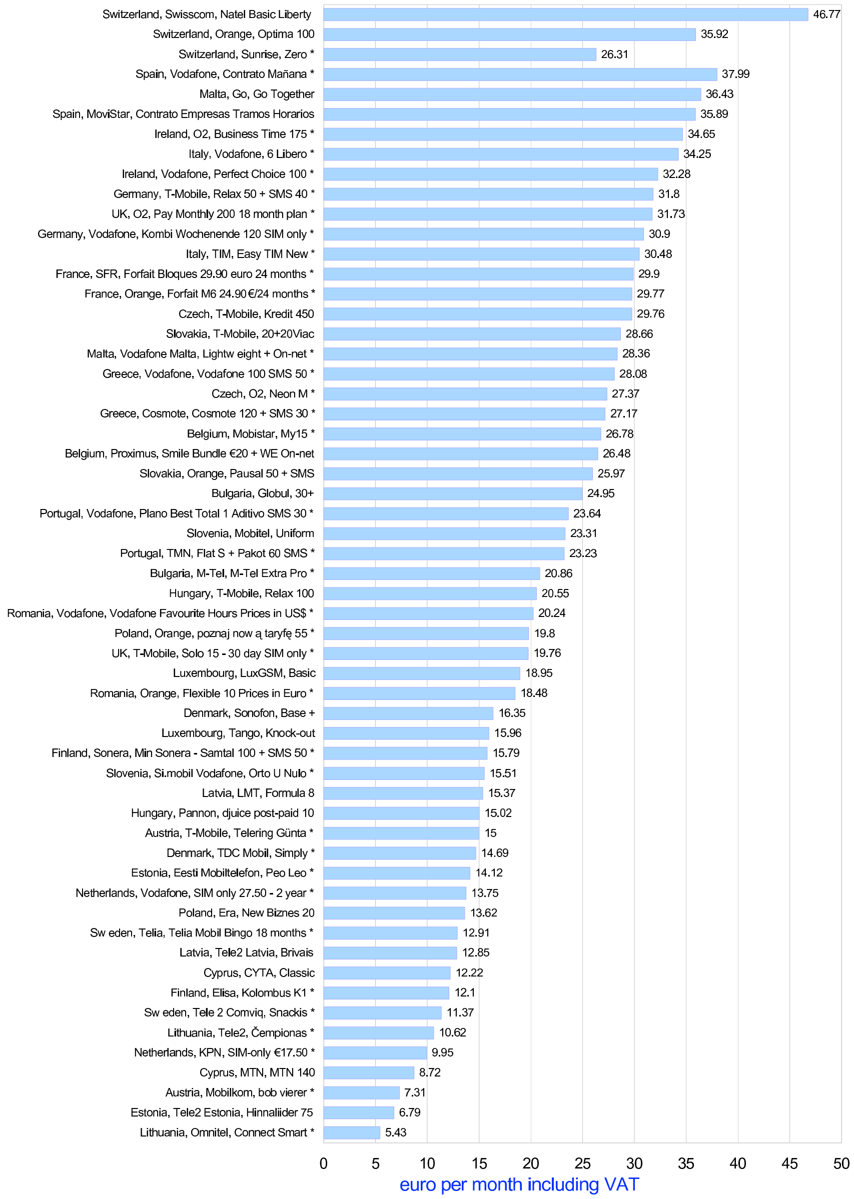
Low usage basket pre & post-paid (2008)



Entries with an asterisk (*) after the name have changed the package name and structure since last year
Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Figure 19

Medium usage basket post-paid (2008)

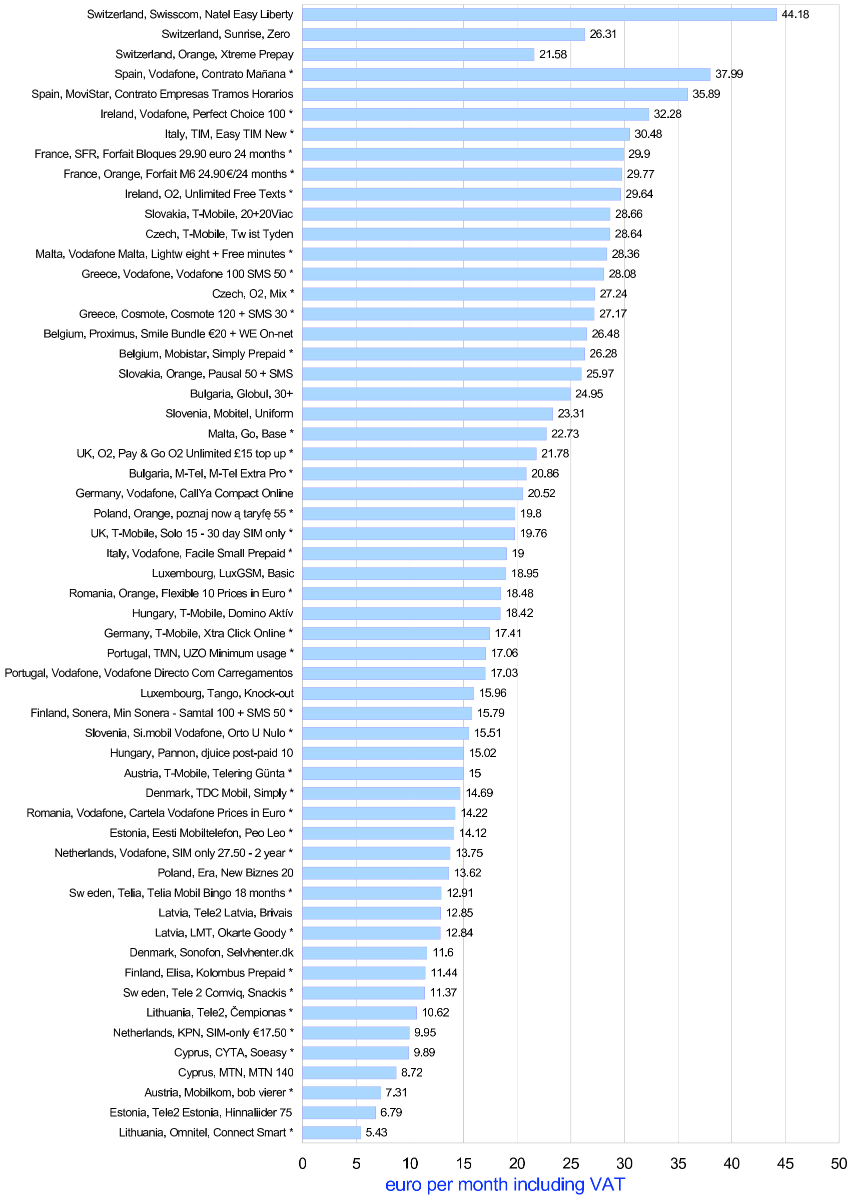


Entries with an asterisk (*) after the name have changed the package name and structure since last year

Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Figure 20

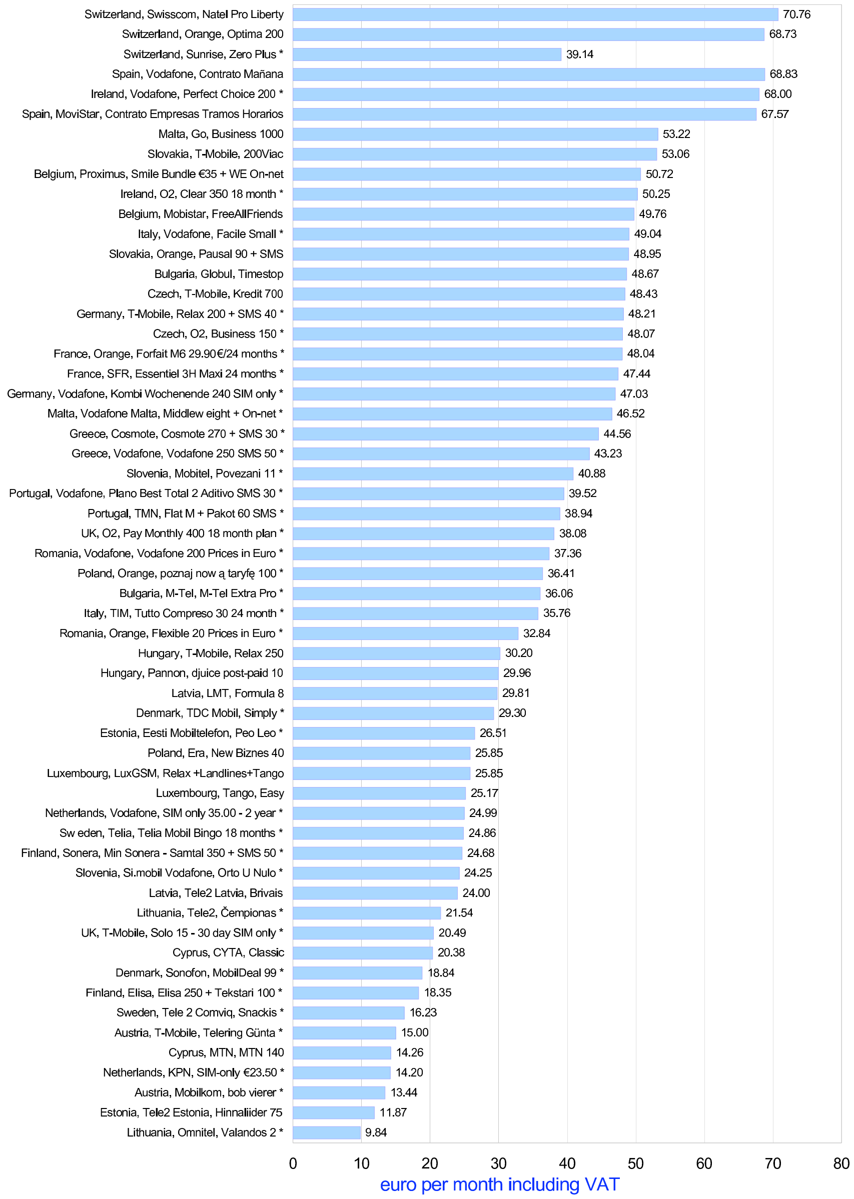
Medium usage basket pre &post-paid (2008)



Entries with an asterisk (*) after the name have changed the package name and structure since last year
Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Figure 21

High usage basket post-paid (2008)

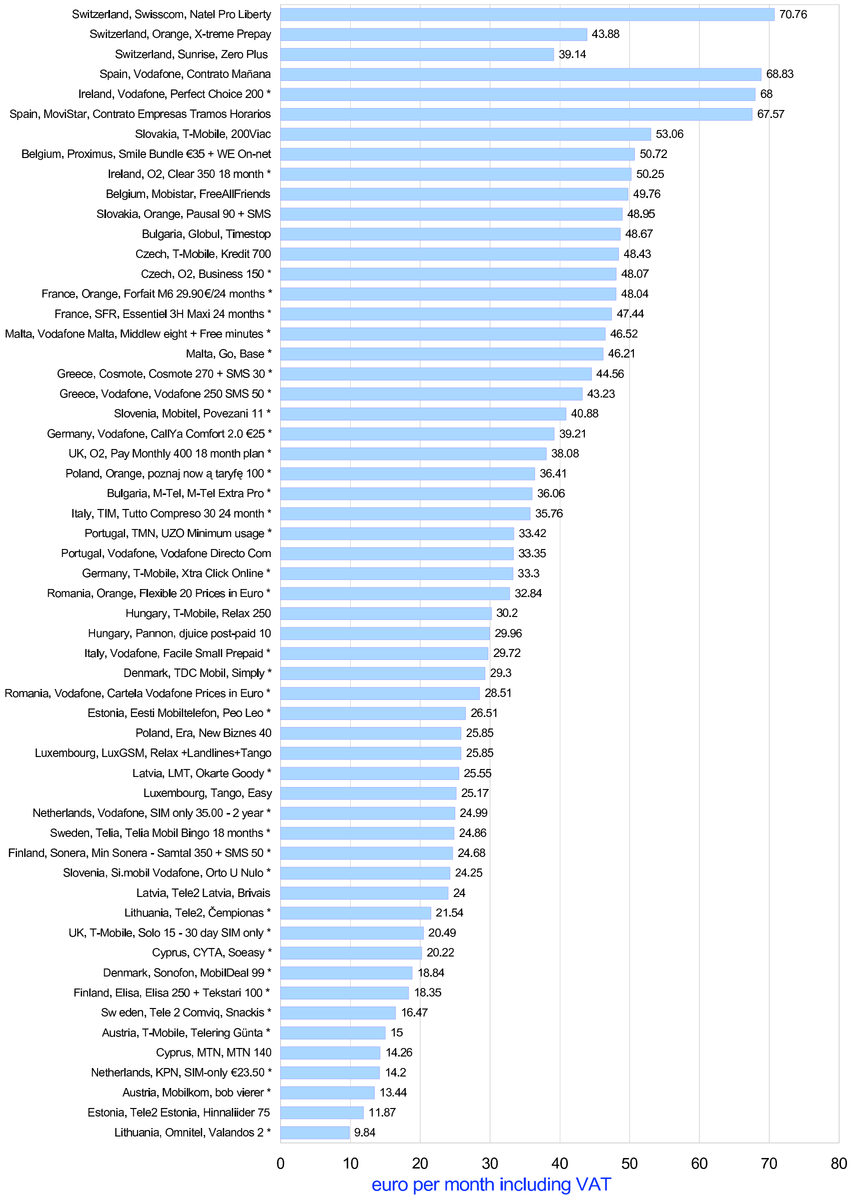


Entries with an asterisk (*) after the name have changed the package name and structure since last year

Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Figure 22

High usage basket pre & post-paid (2008)



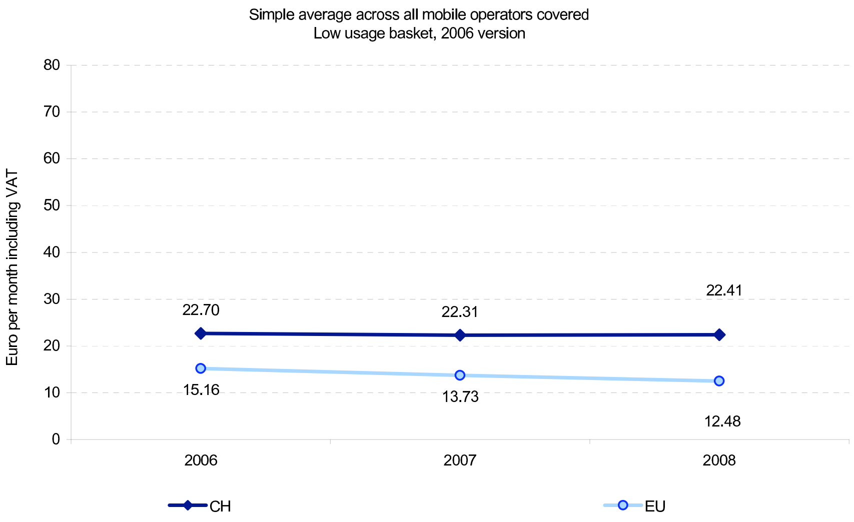
Entries with an asterisk (*) after the name have changed the package name and structure since last year
Sources for Switzerland: Teligen, OFCOM Switzerland calculations

1.5.2 Simple average across all mobile operators

The simple national average for Switzerland is calculated on the basis of the data for three leading mobile operators (Swisscom, Sunrise and Orange). These values are considerably higher than the European average regardless of the usage level and the year considered. In 2008, the best result for the Swiss basket (high usage basket, pre- and post-paid products) was 51.1% more expensive. For the other baskets, the difference was over 53.0% to a maximum of 79.6% (low usage basket, only prepaid products).

Average Low usage basket post-paid, 2006-2008

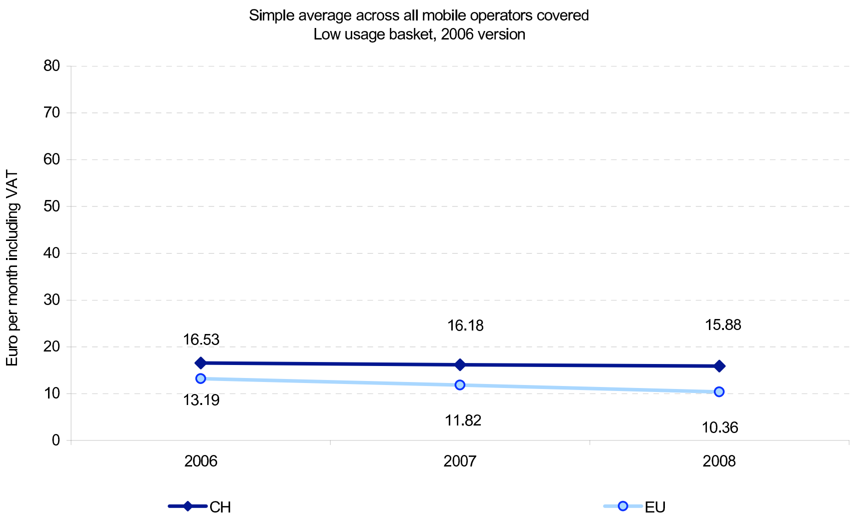
Figure 23



Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Average Low usage basket pre & post-paid, 2006-2008

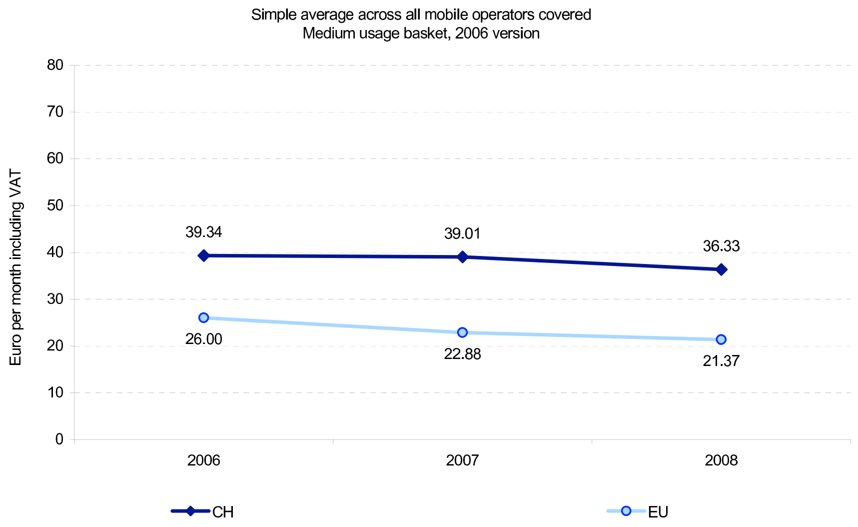
Figure 24



Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Average Medium usage basket post-paid, , 2006-2008

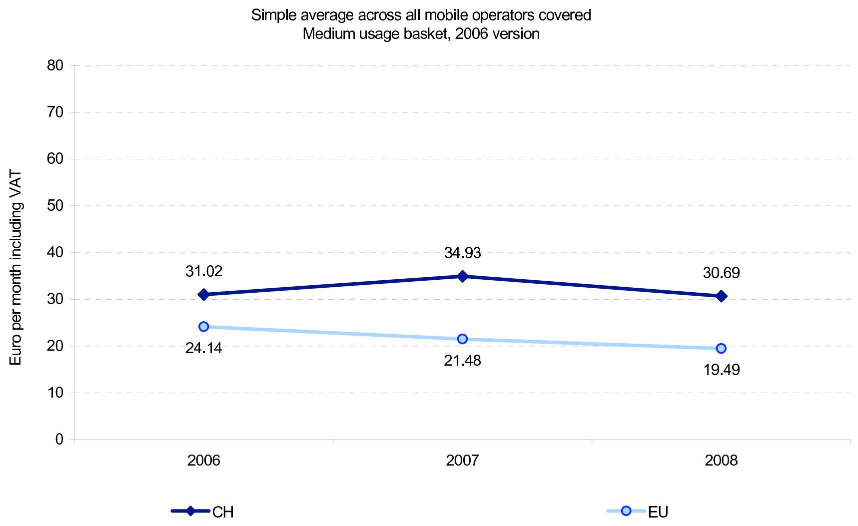
Figure 25



Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Average Medium usage basket pre & post-paid, 2006-2008

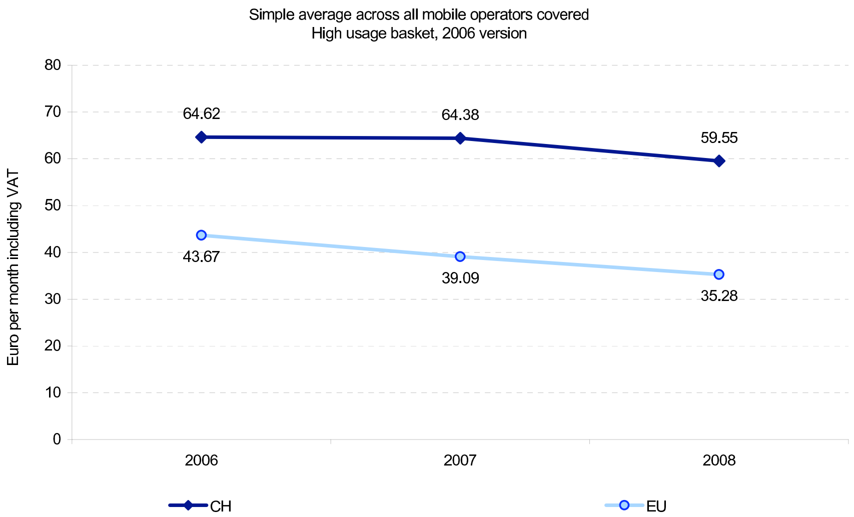
Figure 26



Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Average High usage basket post-paid, 2006-2008

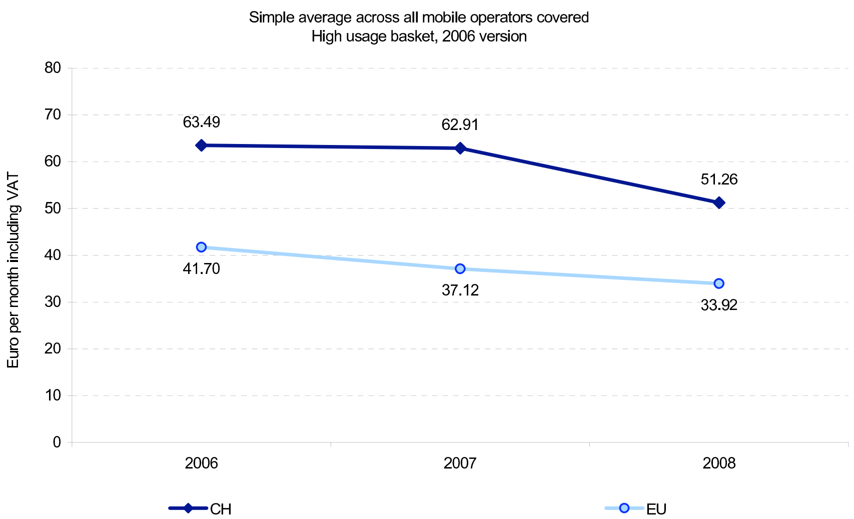
Figure 27



Sources for Switzerland: Teligen, OFCOM Switzerland calculations

Average High usage basket pre & post-paid, 2006-2008

Figure 28



Sources for Switzerland: Teligen, OFCOM Switzerland calculations

1.6 Call termination on mobile networks

This section presents the per-minute interconnection charges for fixed call termination on the networks of mobile operators based on the first three minutes of a call at peak rate. Where available charges for call termination on the networks of 3G operators and service providers (MVNO and resellers) have been included. Charges are for calls originated in the same countries.

In the following charts information is shown for 92 mobile operators in the EU (representing almost 100% of the EU mobile market) and for 4 mobile operators in Switzerland (Swisscom, Sunrise, Orange and Tele2. Where available, information on mobile-to-mobile termination rate has been indicated in the notes.

Data has been collected by the NRAs, and refers to 1 October 2008, also for Switzerland.

1.6.1 EU and national average

The following chart shows the trend at EU level in the (weighted) average fixed-to-mobile termination charges for all mobile operators in the EU since October 2005. The EU trend should be considered as indicative, since Bulgaria and Romania have been included only in 2007.

The national averages for all mobile operators in each Member States are weighted average charges based on the number of subscribers and the termination rate of each operator at 1 October 2008.

Where available, national averages based on interconnection traffic data have been shown. This gives a better indication of EU national average.

Where available, data for 3G operators and service providers have been taken into account. The 2008 exchange rates have been applied to the non euro-zone countries for previous years.

Despite the continuing decline, termination charges remain on average more than 10 times higher than the fixed interconnection charges (single transit).

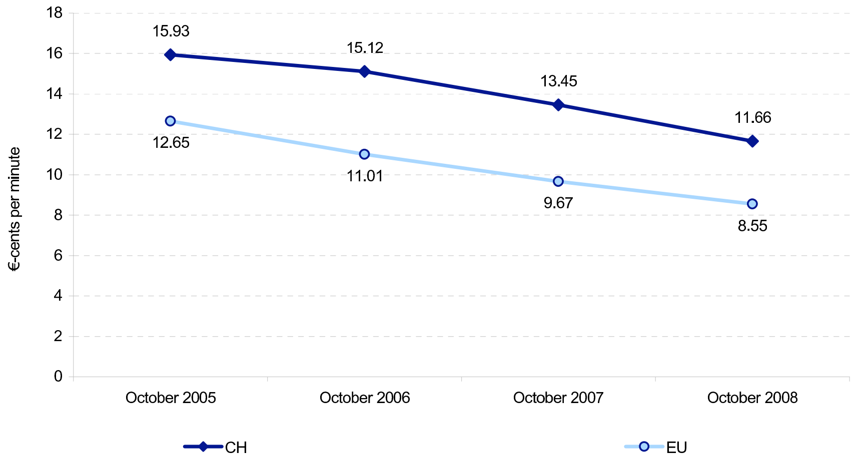
The trend shows that termination charges have continued to decrease and at October 2008 the EU average termination charge was 11.58% lower than one year before (32.41% respect October 2005). Form 2007 to 2008, the most significant reductions[1] have occurred in Estonia (-47.29%), Latvia (-44.90%) and Portugal (-29.81%). However, mobile termination rate remain very high in Bulgaria (almost doubling the EU average) and in Czech Republic (29.91% above the EU average).

Despite a constant fall (5.1% between 2005 and 2006, 9.6% between 2006 and 2007, 13.3% between 2008 and 2008) the average price charged by Swiss operators in 2008 for call termination on mobile networks was still 36.4% higher than the European average. The Union member countries overall also exhibited a downward trend, so the gap separating Switzerland from its neighbours is not narrowing.

[1] National average calculated on the basis of subscribers.

Figure 29

EU average interconnection charges for call termination on mobile networks

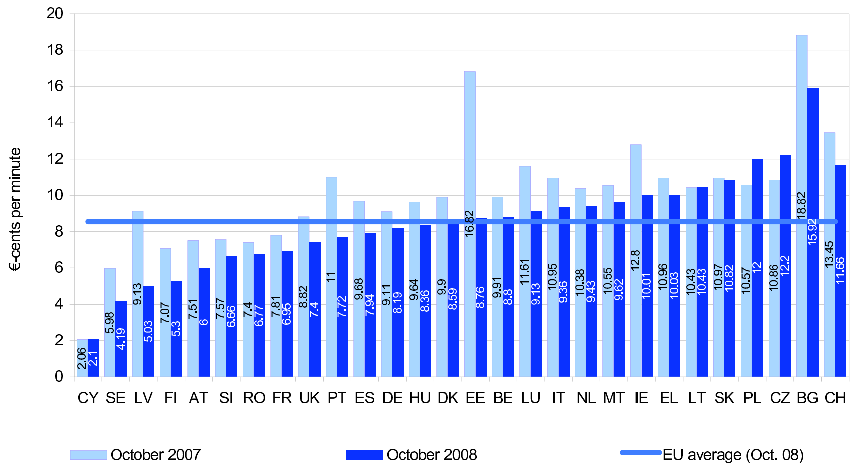


Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

When one examines Figure 30, which gives a more comparable image, it must be stated that the mobile telephony operators active in the Swiss market demand prices which are among the highest in Europe. In the European comparison, there are only three countries in which charges were higher in 2008 (Bulgaria, Czech Republic and Poland). 13 out of 27 countries are below the European average; the cheapest price is charged in Cyprus (2.06 euro-cents).

Figure 30

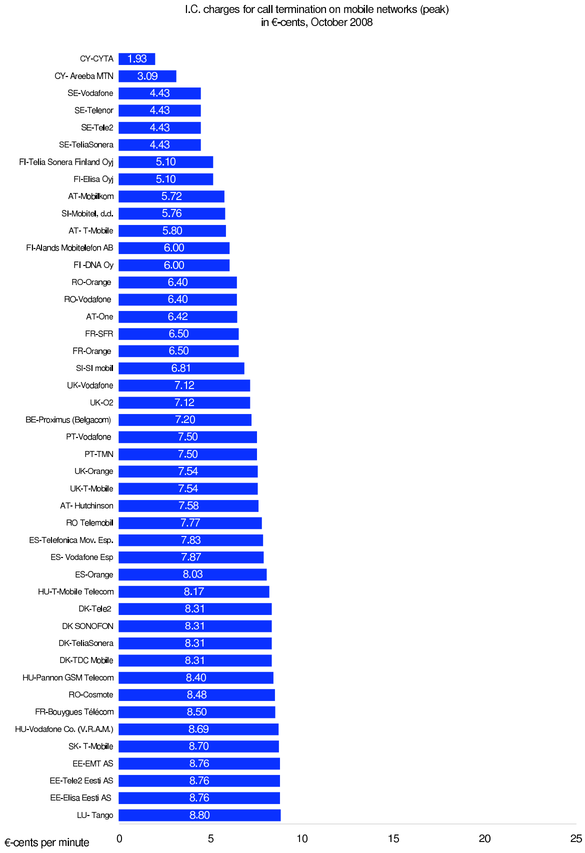
Interconnection charges for call termination on mobile networks
(national average on the basis of subscribers))
EU average Oct. 2008: 8.55 euro-cents



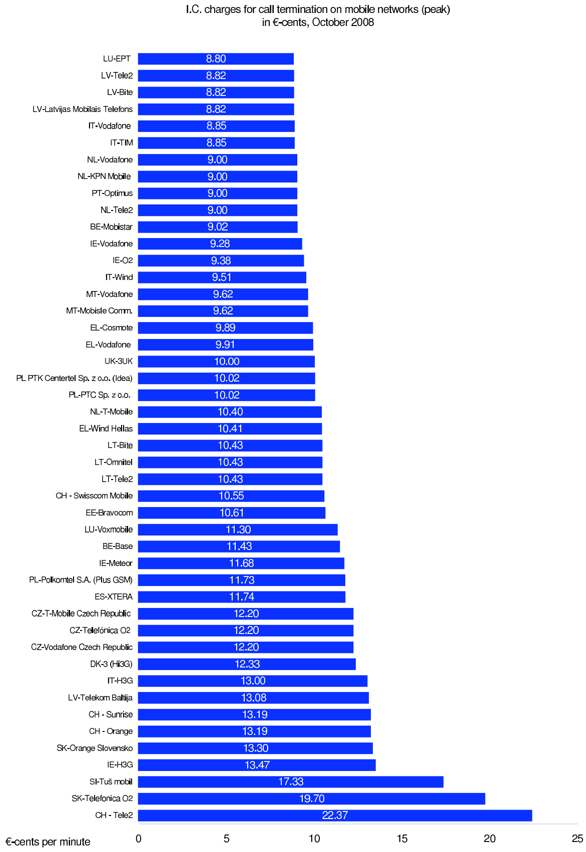
Romania: Cosmote and Telemobil are charging in USD dollars the mobile termination services provided to the fixed incumbent and to the main mobile competitor ; the exchange EUR/USD rates used for Cosmote and Zapp tariffs were 1.42 as of 1st October 2007 and 1.41 as of ast October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

The following charts show the individual fixed-to-mobile interconnection charges for mobile operators in the EU. Cyprus shows the lowest charge (1.92 € cents) whereas the highest charge is found in Slovakia (19.70 € cents).

Figure 31



(a)



(b)

Sources for Switzerland: Telecom operators, OFCOM Switzerland calculations

Chapter 2

Fixed market

This section looks at the number of fixed telecommunications operators (fixed voice telephony and network services) and at the level of competition in the fixed market. It includes data on the number of fixed network operators and public fixed voice telephony operators authorised to provide public voice telephony and to operate a public network at July 2008. The estimated number of players actually active in the fixed market and the incumbents' market shares in the fixed voice telephony market have also been shown.

Data on the number of operators refer to July 2008, while data on the incumbents' market shares in the fixed voice telephony market refer to the end of 2007.

Information has been provided by national regulatory authorities.

2.1 Players in the fixed market

Under the new regulatory framework for electronic communications, operators are only subject to a general authorization regime. Undertakings may be required to submit a notification but may not be required to obtain an explicit decision or any other administrative act. Granting of individual rights of use is required only for scarce resources such as radio spectrum or numbers.

Given the above, the database set up by the national authorities may be very different across the Member States and may include a variety of operators: fixed network operators, service providers, voice over IP services, cable operators as well as wireless local loop, and mobile and satellite operators for the fixed part of their networks and services.

Some Member States are now not able to provide detailed information on the number and types of services provided by the operators that may include other services in addition to public telephony and/or public network services. Therefore, the figures on the number of operators should be considered only as estimates. Furthermore, in some Member States the figure for 2007 is not comparable with the previous implementation reports given the change in the authorization regime.

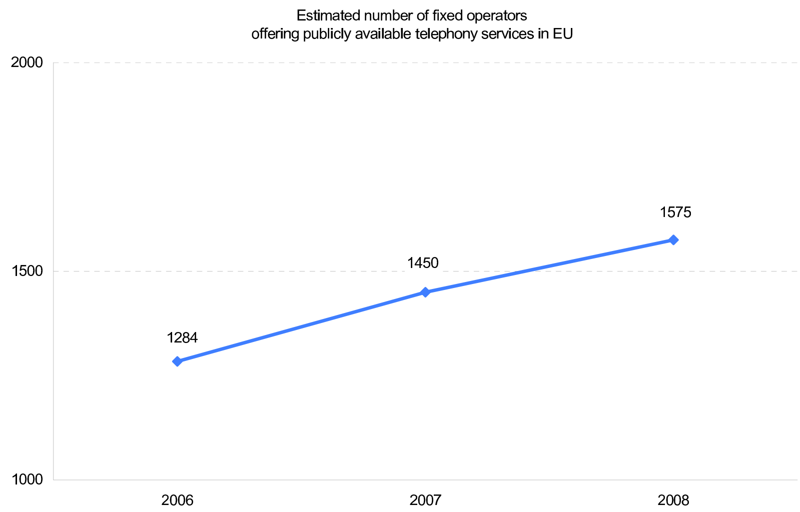
The figures do not take into account operators acting as resellers or offering services based exclusively on pre-paid cards. The figures include cable TV operators that also provide voice telephony or network services.

While it is difficult to measure the exact difference since 2007, data shows that there has been an increase in the number of operators authorised to provide fixed services, even if to a lower extent than in previous years.

As of December 2007 the total number of major competing operators (i.e. operators that along with the incumbent operator have a combined market share of around 90% of the global telephony market) in the EU is around 100. In ten Member States there are five or more major competing operators. In five Member States, competition is still at an early stage with the incumbents' retaining more than 90% of the market and a low level of competition mainly concentrated in the international calls market.

Data on the number of operators were provided by the national regulatory authorities and refer to July 2008. Data on the market shares refer to December 2007.

Figure 32



Switzerland: not applicable

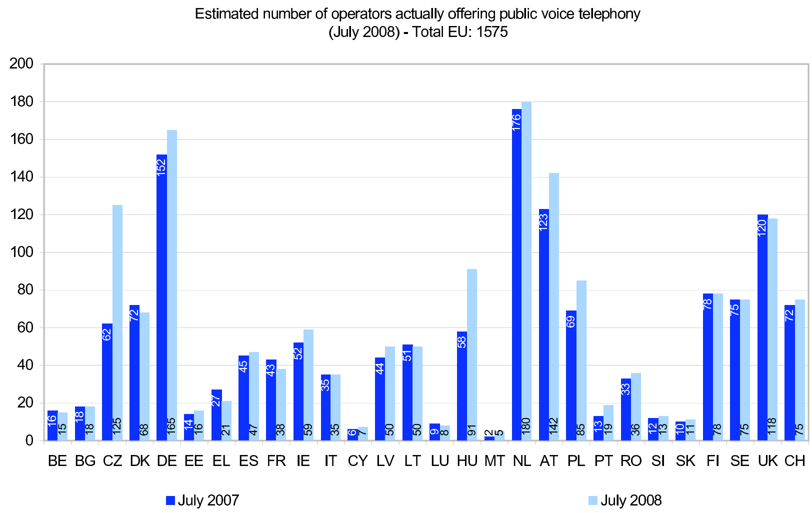
2.1.1 Public fixed voice telephony operators

The chart below shows the total number of operators that are actually offering publicly available telephony services. 'Publicly available telephone service' is defined as a service available to the public for originating and receiving national and international calls and access to emergency services through a number or numbers in a national or international telephone numbering plan.

The figures indicate the total number of local and/or national operators, including the incumbent, effectively providing commercial voice telephony and network services to residential and/or business customers irrespectively of the scope of their offer (national/international calls). Cable operators providing public voice telephony are also included as well as managed VoIP operators.

Figure 33 shows that with 75 active providers, Switzerland belongs to the countries with the most offers for public voice telephony. In comparison with the preceding year, 3 new players appeared on the market. The increase in providers has slowed markedly; in 2007 the increase was 20% whereas in 2008 it was only 4%.

Figure 33

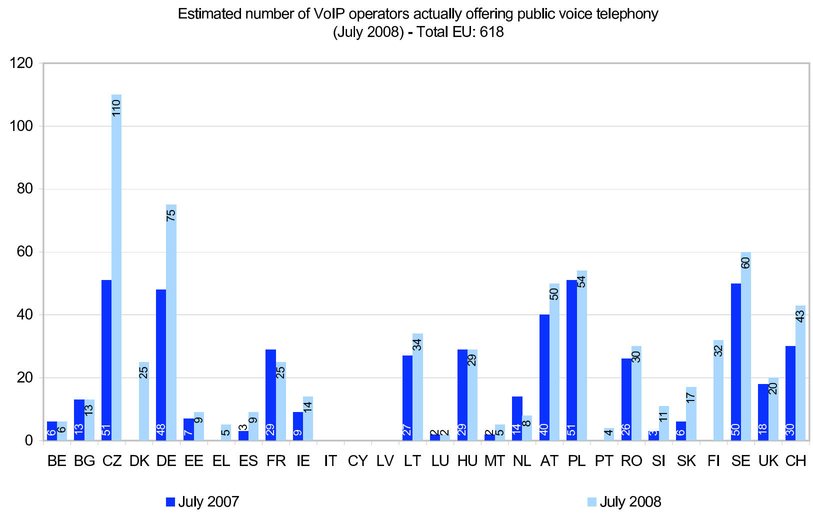


Belgium: PATS: 12 operators with CPS + 2 cable operators + the incumbent.
Bulgaria: Data in total number of operators that are actually offering publicly available telephony services includes the incumbent.
Greece: For 2007, total number of operators that are actually offering publicly available telephony services indicates the number of operators, who have received a range of (geographic) numbers from the National Numbering Plan.
France: Data as of March 2008.
Austria: estimates based on national data request for 2007.
Portugal: The total number of operators includes the incumbent and 2 fully-owned PT subsidiaries.
Romania: A corrected figure for 2007 number of voice telephony operators has been provided.
Source for Switzerland: OFCOM Switzerland. Data refer to December 2006 and 2007

The following chart shows the estimated number of managed VoIP operators offering public voice telephony services 'Managed VOIP (voice over broadband) operator' is defined as an operator providing a publicly available telephone service (PATS) using voice over internet protocol technology (VoIP), whereby the operator controls the quality of service provided. Unmanaged voice and 'peer to peer' services should not be included. PATS should include access to emergency services.

In Switzerland, 43 operators share the IP telephony market. The majority of these connections (85%) are based on CATV and only 15% on PSTN/ISDN or fibre. Switzerland is among the leading European countries (6th out of 25) which have the largest number of operators offering this service.

Figure 34



Data not available for Italy and Latvia.
Bulgaria: Data for total number of managed VoIP operators that are actually offering public voice telephony as of December, 31, 2007.
Spain: A corrected figure for 2007 number of VoIP operators has been provided.
France: Data as of March 2008.
Italy: Data not available.
Austria: estimates for 2008 based on national data request for 2007.
Romania: Estimated figures.
Cyprus: data not available.
Source for Switzerland: OFCOM Switzerland. Data refer to December 2006 and 2007

2.2 Incumbents' market share in the fixed voice telephony market

This section shows the incumbents' market share in the fixed voice telephony markets.

Apart from the overall fixed voice telephony market, submarkets for fixed calls to mobile networks, national fixed calls (including phone local calls, local calls to internet, long-distance calls and fixed calls to mobile networks) and international fixed calls are also shown.

It has to be noted that in Switzerland local and long-distance calls data have no longer been collected since 2003 due to the introduction of the closed numbering plan in March 2002. Since that date, the historic operator has applied a new charging system which offers only one tariff, regardless of distance. We therefore decided to display for 2003 and the following years an aggregated indicator which combines local and long-distance calls.

Figures for market shared are calculated on retail revenues and outgoing minutes of traffic. Market share based on retail revenues exclusively refers to revenues from call markets and does not include any access revenue.

The EU averages are weighted according to the population of each MS. Furthermore, data from Bulgaria and Romania have not been taken into account as both countries were not part of the EU in the period covered (2004-2006).

The market shares are based on traffic/revenues from publicly available telephone services and include managed Voice over IP Services (VoIP) and calls made from public payphones. Traffic/revenues from peer-to-peer VoIP, simple reselling and calling cards are excluded. However, the above criteria are not followed by all MSs. For this reason the figures are not strictly comparables between countries.

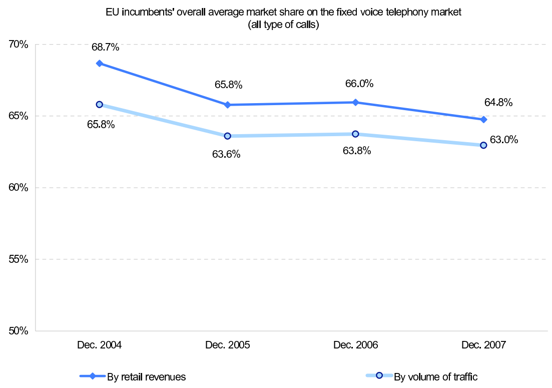
Figures have been provided by NRAs and refer to 31 December 2007 (data for the United Kingdom are for calendar year). Data for some countries (like Germany, Cyprus and Finland) are estimations by NRAs.

2.2.1 EU average incumbents' market share

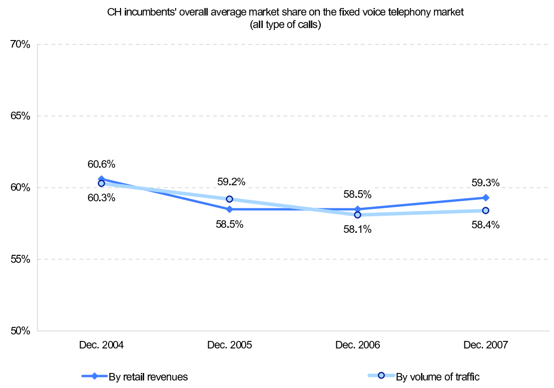
The following charts show the trend for the EU weighted average of the incumbents' market share in the major segments of the voice telephony market since 2004.

The market share of the Swiss incumbent, based on retail revenues and the volume of traffic, is slightly smaller than the weighted average of the EU incumbents' market share. At the end of 2008 the difference was about 5 points. In Switzerland, the market share measured according to the volume of traffic corresponds more or less to the market share measured by retail revenue. The EU average of the market share measured according to retail revenues has remained constant at about 2 points higher.

Figure 35



(a)

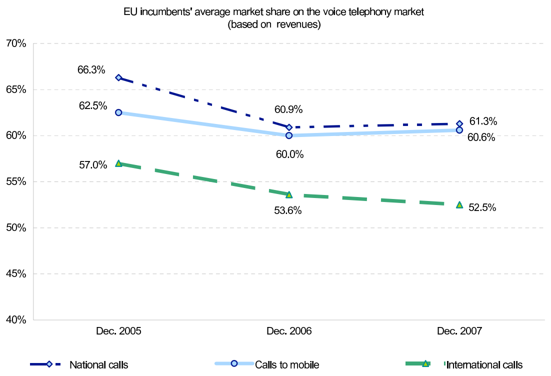


(b)

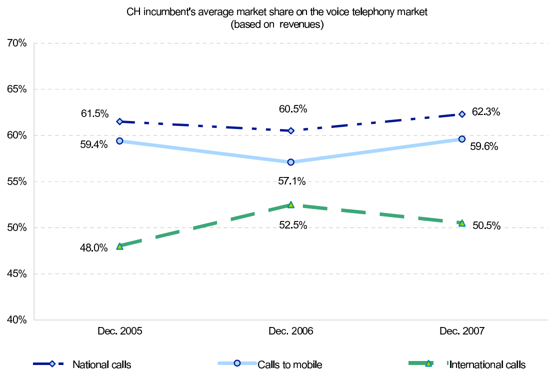
Sources for Switzerland: OFCOM Switzerland calculations

In terms of the incumbents' average market share based on revenue, it is evident that Switzerland is below the European average except for the national calls segment. Since December 2007 the Swiss incumbent's market share has been slightly above the EU level (EU - Figure 36(a) and CH – 36(b)). Apart from 2006, the development trends in all segments of the Swiss market have followed those in the EU.

Figure 36



(a)



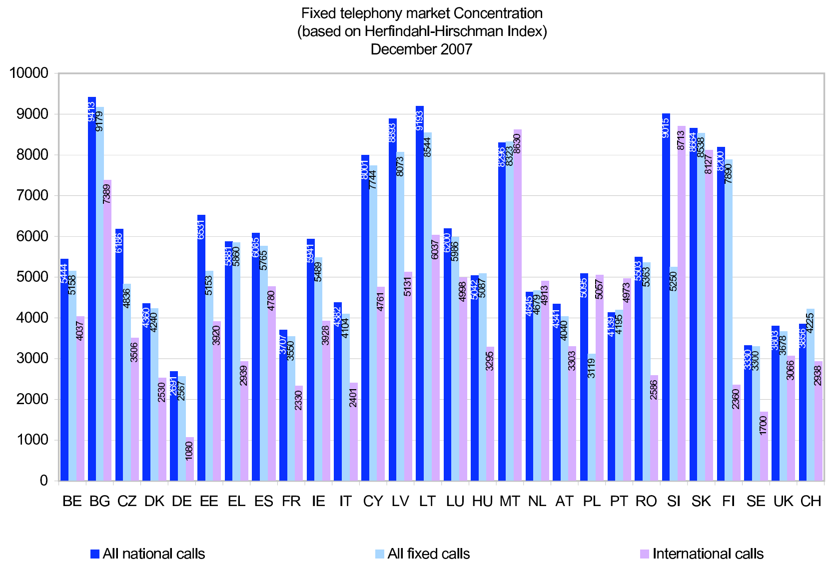
(b)

Source for Switzerland: OFCOM Switzerland calculations

The following chart shows the indexes of concentration for the fixed telephony market in the Member States at 31 December 2007 based on the Herfindhal-Hirschman index. This is a market concentration index defined as the sum of the squares of the market share of the competitors in the relevant markets. The index can take the value of 10 000 when the market is entirely controlled by a single firm and it decreases as concentration reduces. Comparisons between the other Member States should be considered as indicative, since the reference markets are not completely homogeneous.

In terms of concentration in the different market segments, it is clear that Switzerland is favourably positioned in comparison with other European countries. It is at the same level as Sweden, Austria or Denmark, i.e. among the countries where the market is shared relatively equitably between the players. The country in which market concentration is least prevalent is Germany.

Figure 37

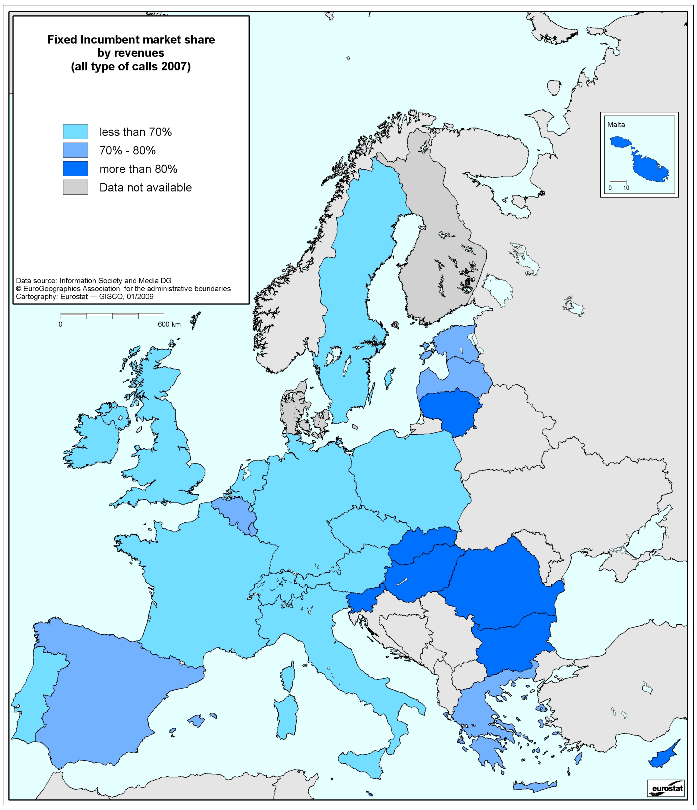


Belgium: Herfihndahl index based on revenues.
Cyprus: approximation - based on 90-95% for the market volume.
Germany: On the basis of outgoing minutes - data as of 31.12.2006.
Estonia: Fixed call minutes All fixed calls (revenues).
Luxembourg: based on outgoing minutes.
Portugal: revenue based.
Source for Switzerland: OFCOM Switzerland calculations

2.2.2 Incumbent's overall market share in each Member State

The following charts shows the incumbents' market share in the overall fixed voice telephony market by retail revenues and by minutes of outgoing traffic. All types of calls are included: local phone calls, local calls to internet, long-distance calls, international calls and fixed calls to mobile networks. Market share based on retail revenues does not include any access revenue. Figures are not available for some Member States.

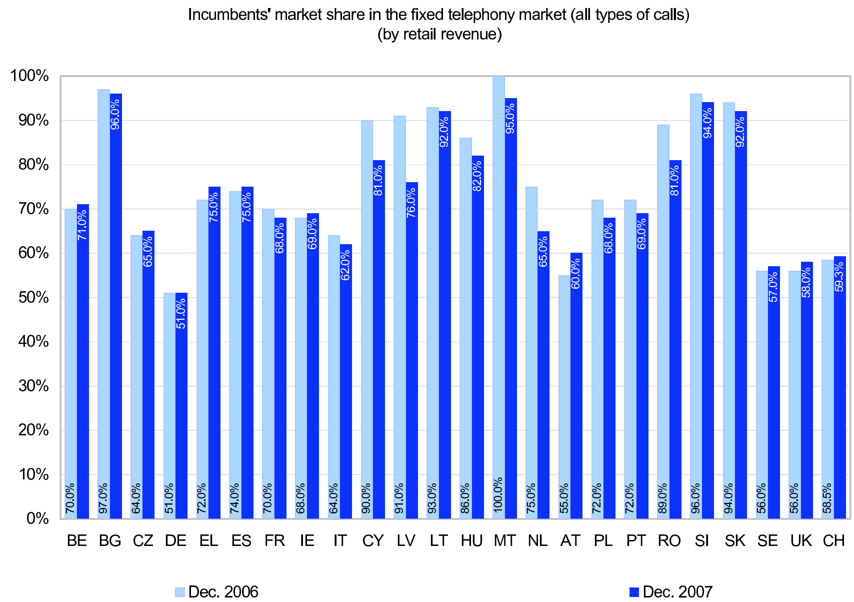
Figure 38



Source for Switzerland: OFCOM Switzerland calculations

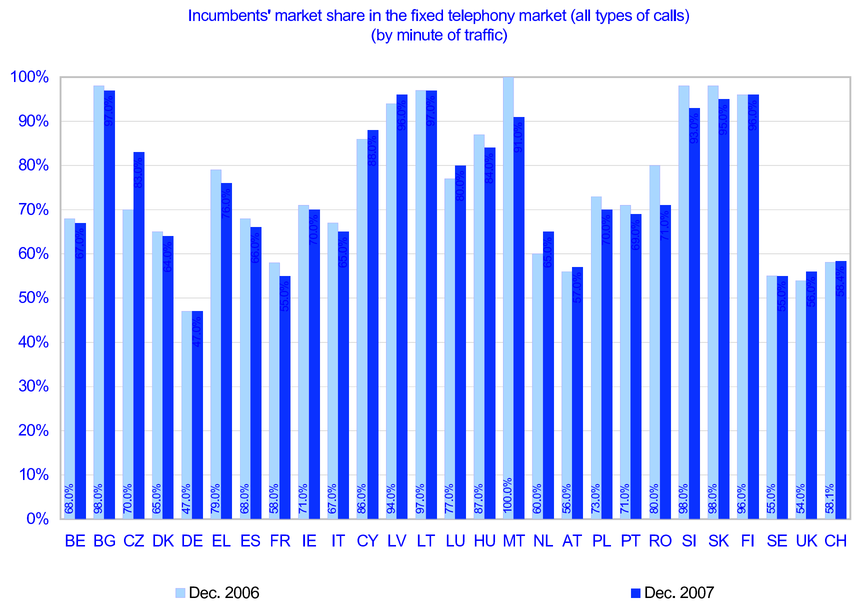
In relation to market share, Swisscom was positioned fourth in terms of revenue (59.3%) and fifth in terms of minutes (58.4%) in the European ranking.

Figure 39



(a)

Data not available for Denmark and Finland.
Estonia and Luxembourg: Market shares are confidential.
Romania: estimated figures.
Source for Switzerland: OFCOM Switzerland calculations. Internet local calls are not included



(b)

Estonia: Market shares are confidential.
Italy: values on national calls only.
Source for Switzerland: OFCOM Switzerland calculations. Internet local calls are not included

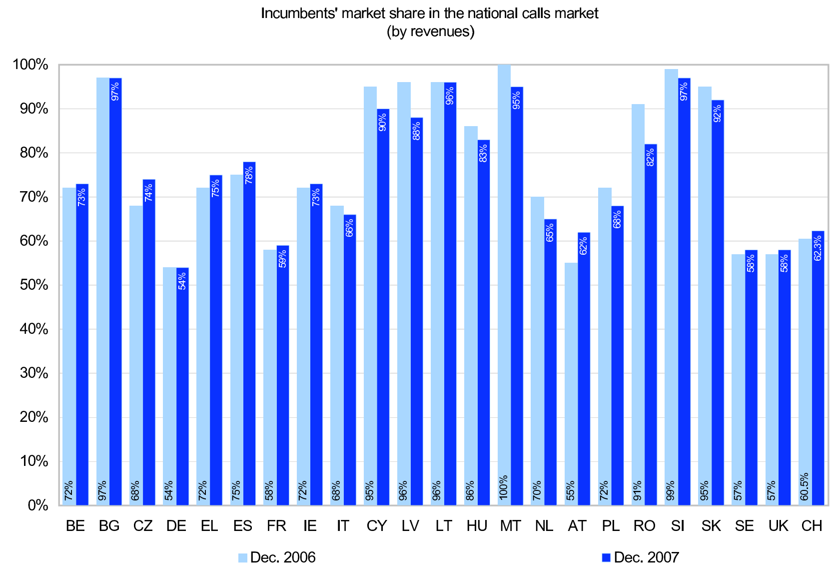
2.2.3 Incumbent's market share in the different segments of the market

The following charts show the incumbents' market share in the national calls, international calls and fixed calls to mobile networks by retail revenues and by minutes of outgoing traffic. The national calls market includes local phone calls, local calls to internet, long-distance calls and fixed calls to mobile networks.

Figures are not available for some Member States.

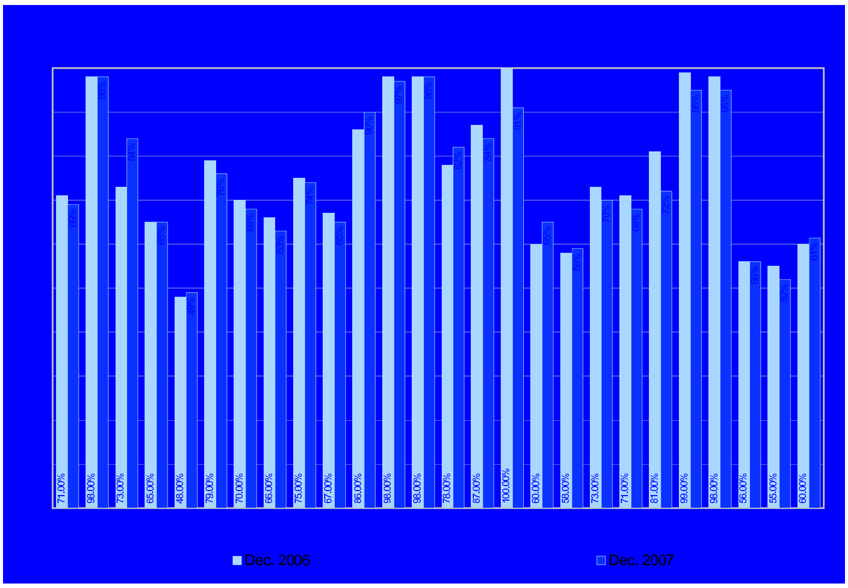
In the national call segment, measured in terms of revenue and traffic, it is clear that the situation in Switzerland is relatively competitive, with the country placed 5th and 6th in the international ranking. Interestingly, in most of the countries where there is a lot of competition, the incumbent’s market share has increased compared to the preceding year. In most of the low-competition countries the opposite could be observed.

Figure 40



(a)

Data not available for Denmark and Finland.
Estonia and Luxembourg: Market shares are confidential.
Romania: estimated figures.
Source for Switzerland: OFCOM Switzerland calculations. Internet local calls are not included

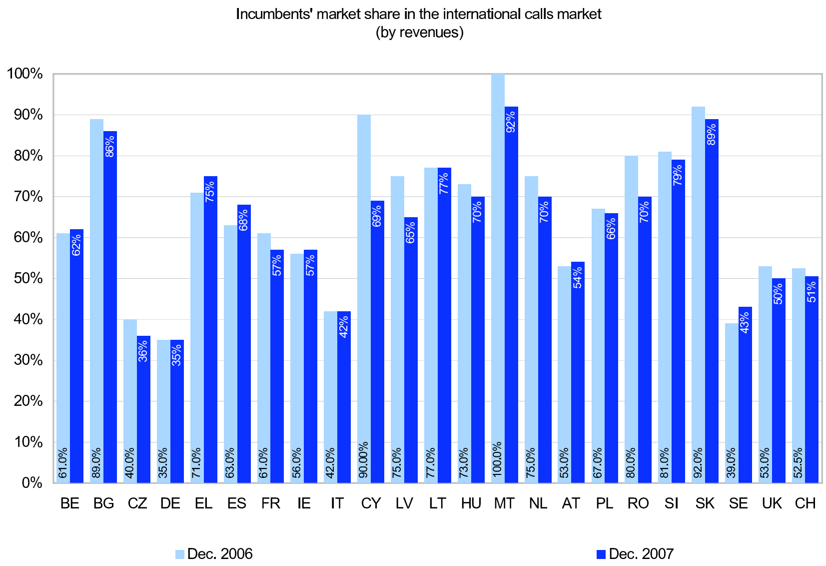


(b)

Estonia: Market shares are confidential.
Finland: Data not available.
Source for Switzerland: OFCOM Switzerland calculations. Internet local calls are not included

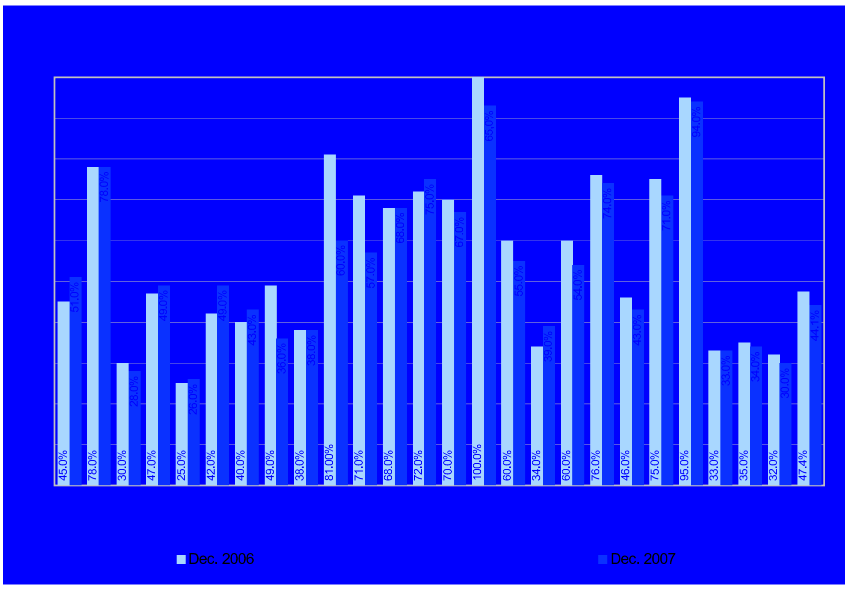
In comparison with the other European incumbents, at the end of 2006, in terms of revenue (Figure 41(a)), Swisscom's international call market share was lower than that for most European countries. The sole exceptions are the market shares for international calls in the UK, Czech Republic, Germany, Italy, Austria and Sweden. The situation is different for the case of market share based on minutes (Figure 37(b)): in this case 10 countries have a lower market share in the international calls segments. The difference between the market share in terms of revenue and in terms of traffic is distinctive in most of the countries. This might indicate that the incumbent charges higher prices for international calls than alternative operators.

Figure 41



(a)

Data not available for Denmark and Finland.
Estonia and Luxembourg: Market shares are confidential.
Romania: estimated figures.
Source for Switzerland: OFCOM Switzerland calculations

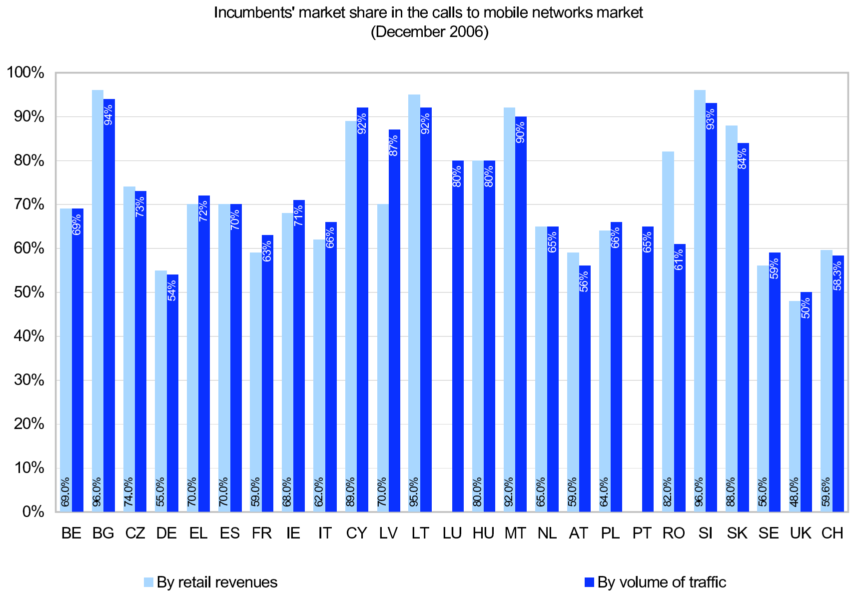


(b)

Estonia: Market shares are confidential.
Greece: International calls through prepaid cards have been taken into account.
Source for Switzerland: OFCOM Switzerland calculations

Figure 42 shows the market shares in terms of minutes and revenue for calls from the incumbent's fixed network to a mobile network. With 58.3% of market share expressed in minutes, Swisscom was in the 20% of historic operators with the lowest market shares in Europe. Swisscom's market share in terms of minutes is slightly lower than that for revenue (59.6%).

Figure 42



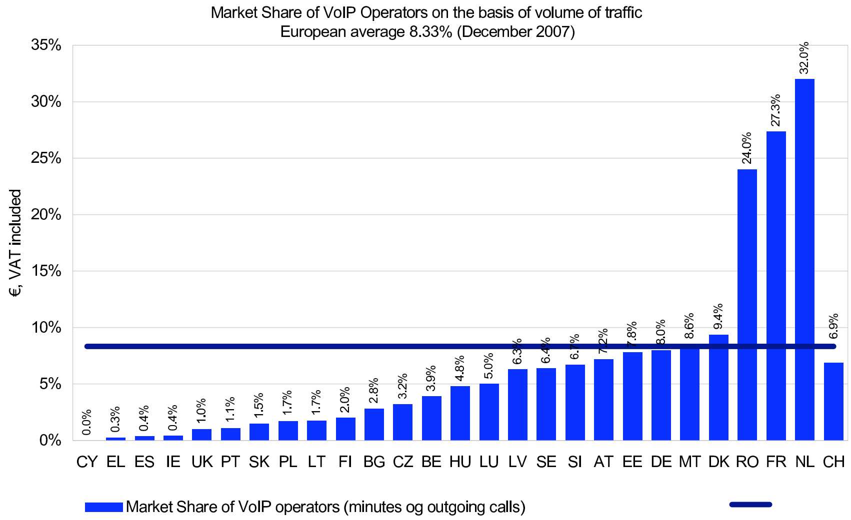
Data not available for Denmark and Finland.
Belgium: Reviewed figure of 2006 and figure of 2007: calculation based on the whole year instead of the 2nd semester.
Cyprus: Estimated.
Estonia: Market shares are confidential.
France: 2007 figures are estimations. 2006 figures have been updated.
Luxembourg: Revenues market shares are confidential.
Austria: Fixed market shares are confidential.
Romania: estimated figures.
Source for Switzerland: OFCOM Switzerland calculations

2.2.4 VoIP market share

The following chart shows the available data for operators' market share on the voice over broadband market. The market shares have been calculated on the basis of outgoing minutes of traffic for all fixed calls as of 31 December 2007. The figures consider only managed VoIP services meaning publicly available telephone services (PATS) using voice over internet protocol technology), whereby the operator controls the quality of service provided though an IP network, at a speed over 128 Kbit/sec. Unmanaged voices over IP and peer-to-peer services are not included. However, the above criteria are not followed by all MSs and the figures are not strictly comparables between countries.

Figure 43 illustrates the market shares of the Voice over IP segment (VoIP) in terms of traffic. At the end of 2006 this segment had a market share in Switzerland of only 0.1% and was very poorly positioned compared to the other countries. At the end of 2007 the situation had changed, with Switzerland (6.9%) now placed in the middle, but still far behind Romania, France and the Netherlands.

Figure 43



Belgium: Figure underestimated as one operator does not provide a split between VoB calls and other calls -based on figures of 5 alternative operators.
Denmark: Incl. VoiP with no quality of service
Luxembourg: The market share of VoIP Operators (5%) is an estimation for managed and unmanaged VoIP traffic. There are no 'Voice over Broadband' Operators active in Luxembourg, with the exception for CATV operators offering telephony by IP.
Italy: Not available.
Ireland: Estimated figures.
Cyprus: Not managed end to end.
Austria: estimate based on number of VoB subscribers.
Finland: Estimation based on number of subscriptions.
Source for Switzerland: OFCOM Switzerland calculations

2.3 Consumers' choice of fixed operators

This section analyses the fixed voice telephony market from the point of view of consumers. It gives information on the percentage of subscribers using an alternative provider other than the incumbent (for phone services and direct access) and the facilities used by alternative operators for the provision of voice telephony.

The data presented below have been provided by the national regulatory authorities and, unless otherwise indicated, report the position as of July 2007. Figures for countries not included in the charts are not available and are not always comparable with those published in previous reports due to changes in the methodologies and/or in the classifications used by the Member States. Furthermore, separate data for type of calls are not available in a number of Member States. Information on consumers' use of alternative providers is unavailable in a number of new Member States. For these reasons the figures presented in this section should be considered as indicative.

2.3.1 Percentage of subscribers actually using an alternative provider other than the incumbent

Incumbents' customers have the possibilisty of using an alternative provider, either by dialling a call-by-call prefix (*carrier selection*, *CS*) or by choosing to route all calls by default to the network of an alternative operator (*carrier pre-selection*, *CPS*). The use of an alternative operator through carrier selection/carrier pre-selection does not exclude the possibility of also using the incumbent's services. *Direct access* is also available to users through alternative operators' proprietary wireline/wireless access or through unbundled local loops leased from the incumbent. The following charts shows the percentage of EU subscribers (residential and business) uing an alternative provider for local, long distance and international calls and for direct access.

The methodology for the calculation of the percentage of subscribers (residential + business) actually using a provider other than the incumbent operator for national calls is the following:

1. National calls: X/Y
   X = sum of all alternative operators' subscribers (residential + business) with CPS contract + sum of all alternative operators' subscribers (residential + business) with direct access for voice telephony (ULL and proprietary infrastructure).
   Y = total number of residential + business subscribers of the incumbent and new entrants, with a standard/party/group telephone lines access. Direct telephone line access provided by an alternative operator can either be through proprietary infrastructure or full ULL .

2. International calls: X/Y
   X = sum of all alternative operators' subscribers (residential + business) with CPS contract + 50% of the sum of all alternative operators' subscribers (residential + business) with CS contract + sum of all alternative operators' subscribers (residential + business) with direct access for voice telephony (ULL and proprietary infrastructure).
   Y = total number of residential and business subscribers of the incumbent and new entrants, with a standard/party/group telephone lines access. Direct telephone line access provided by an alternative operator can either be through proprietary infrastructure or full ULL (in the latter case, please consider the number of unbundled active lines, and not the total number of unbundled lines).

3. Direct access: X/Y
   X = total number of subscribers with direct access, fully ULL connection or with a cable access owned by an alternative operator
   Y = total number of subscribers with direct access, fully ULL connection or with a cable access owned by an alternative operator + total number of subscribers owned by the incumbent operator

.
The following charts illustrate the percentage of subscribers using an alternative provider for voice telephony services through carrier selection and/or carrier pre-selection and/or direct access. Where available, separate figures for national and international calls are given.

Figures for some countries are not comparable with 12th Implementation Report due to a change in the national data collection or to different data provided by NRAs.

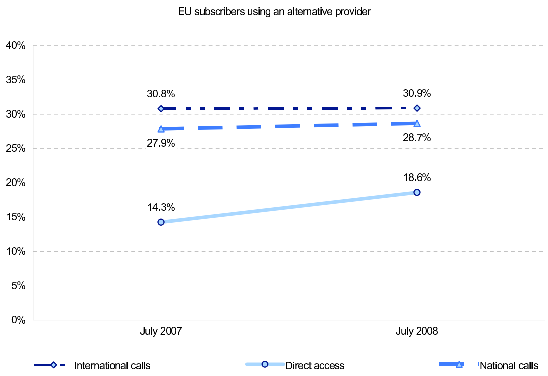
As of July 2007, almost 30% of EU subscribers used an alternative provider to route international calls, almost 28% for national calls. At the same time, direct access from alternative providers was used by 13.5% of EU subscribers. Since last year, the percentage of subscribers using an alternative provider has significantly grown. The trend of the EU average should be considered as indicative, since not all data are available for all Member States.

Chart 44b illustrates the percentage of subscribers using an alternative provider for voice telephony services through carrier selection and/or carrier pre-selection and/or direct access. Where available, separate figures for national and international calls are given.

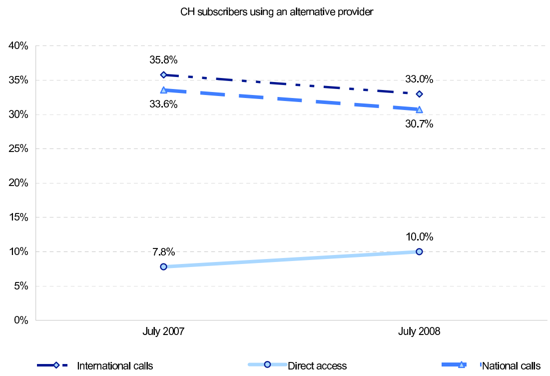
Figures for some countries are not comparable with the 13th Implementation Report due to a change in the national data collection or to different data provided by NRAs.

In Switzerland, one in three consumers uses the services of an alternative provider for national or international calls. These values (30.7% and 33.0%) are only slightly higher than the EU average (28.7% and 30.9%). Whereas the market share of alternative providers is increasing in Europe, it is decreasing in Switzerland. The difference between the EU and the Swiss level has decreased from 5 points (July 2007) to 2 points (July 2008).

Figure 44

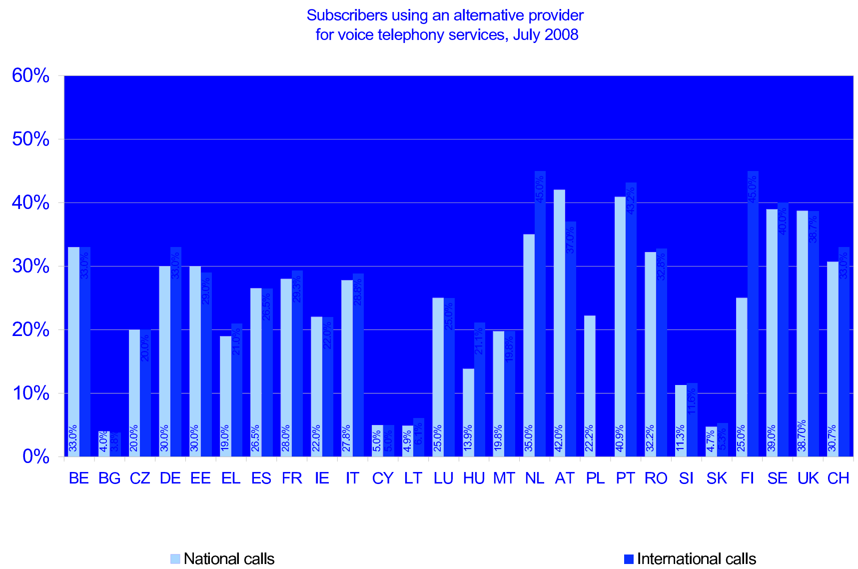


(a)



(b)

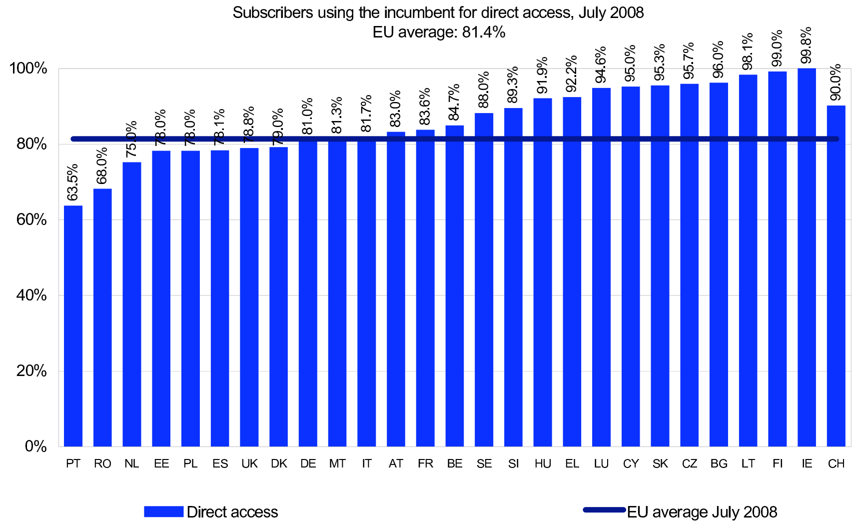
Bulgaria: Most operators can not separate data for type of calls. Therefore the figures in positions national calls and international calls should be considered as indicative. Data as of July, 2007 are recalculated.
Denmark: The indicate figure comprises only direct access via. PSTN or ISDN and thus excludes direct access to fixed network telephony via. Cable or WIMAX. Please note that direct access through alternative operators presently owned by TDC is included in the reported figures.
Germany: estimated figures.
Greece: National and international calls, figures refer to 31/12 of the previous year. Direct Access refers to 1/7 of the respective year.
France: VGA offers included except for direct access.
Luxembourg: Data refers to end of previous year and to lines instead of subscribers.
Netherlands: The percentage is an approximation, as the exact figure is confidential.
Austria: estimates based on national data request for 2007.
Source for Switzerland: OFCOM Switzerland calculations. Data refer to December 2006 and 2007



(c)

Cyprus: estimated figures.
Luxembourg: Data refers to end of previous year and to lines instead of subscribers.
Poland: Not able to distinguish between national and international calls.
Austria: estimates for 2008.
Slovenia: Based on access lines.
Finland: Based on estimations.
Source for Switzerland: OFCOM Switzerland calculations. Data refer to December 2007

Figure 45



Luxembourg: Data refers to end of previous year and to lines instead of subscribers.
Malta: some subscribers are double counted since certain customers are subscribed to both incumbent and another provider.
Austria: estimates for 2008
Slovenia: Based on access lines.
Source for Switzerland: OFCOM Switzerland calculations. Data refer to December 2007

2.3.2 Facilities used by new entrants for the provision of voice telephony

This section provides information on the facilities used by new entrants to offer voice telephony, particularly to residential users. Data have been provided by the national regulatory authorities and refer to July 2008.

Alternative operators can route users to their network either through a carrier selection system (CS), whereby a user dials a prefix on a call-by-call basis, or by carrier pre-selection (CPS), where the user's calls are routed to the new entrants' network on an automatic basis. New entrants can also provide voice services via direct access to users (through proprietary wire/wireless access or through unbundled local loops leased from the incumbent).

These facilities are not mutually exclusive and very often the same operator uses all three at the same time depending on the type of customers (business or residential), the type of services (national or international calls), the geographical area, the availability of LLU, etc. The following figures should therefore be read separately and not aggregated as country totals.

The following four charts show the number of operators using full local loop unbundling, shared access and proprietary infrastructure by Member State for July 2008. The charts also present an estimate of the number of operators using these facilities as a percentage of the number of active alternative operators (excluding the incumbent). The figures do not show to what extent the operators are offering services to residential and/or business users; nation-wide or only in local areas; in some cases it is not possible to discern whether operators offer all types of calls or only long-distance and international calls.

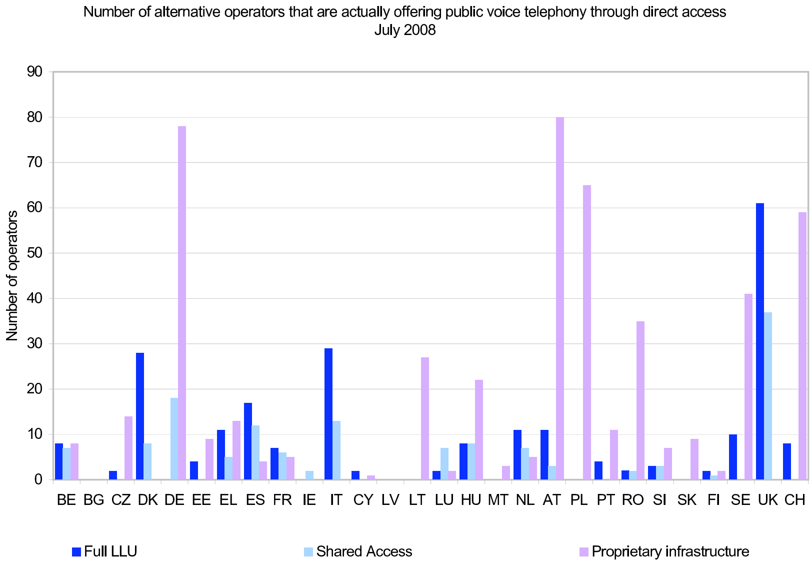
As of 1 July 2008, 23.18% of EU alternative operators offered the voice telephone service through full unbundled local loop, 8.77% through shared access and 27.38% through proprietary infrastructure.

In April 2007, unbundling of the local loop became a reality in Swiss law, whereas this instrument has been in effect in the Union countries since the beginning of 2001. It is from this perspective that the differences between Switzerland and the European Union countries should be interpreted. We should also mention that shared access to the subscriber connection is not regulated.

It was only in the second half of 2007 that the first offerings appeared. By July 2008, there were already 8 operators offering services on unbundled connections (10.8%).

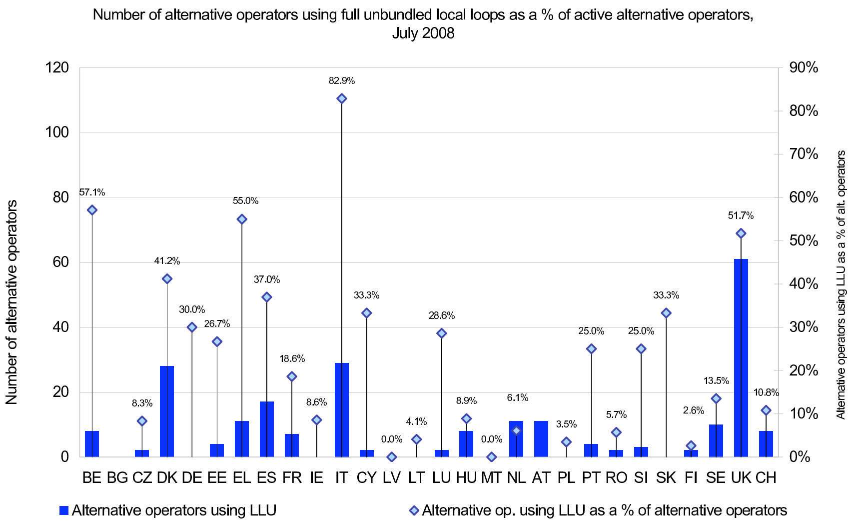
As far as the operators with their own access infrastructure are concerned (Figures 46 and 49), we observe that Switzerland has 59, corresponding to 79.7% of the alternative providers offering public telephony services on the fixed network. This is a remarkable increase, in July 2007 only 61.1% of the alternative providers had proprietary infrastructure. In terms of absolute numbers, Switzerland is very well positioned, since it is in fourth place. However, this level of excellence is tempered by the fact that the majority of operators actually have a very low proportion of direct connections; these are mainly targeted at business customers. Today, only the cable operators offer a genuine access alternative to private customers. However, current investment in new infrastructure, i.e. optical fibre, is being made not only by Swisscom, but also by some cantonal power suppliers.

Figure 46



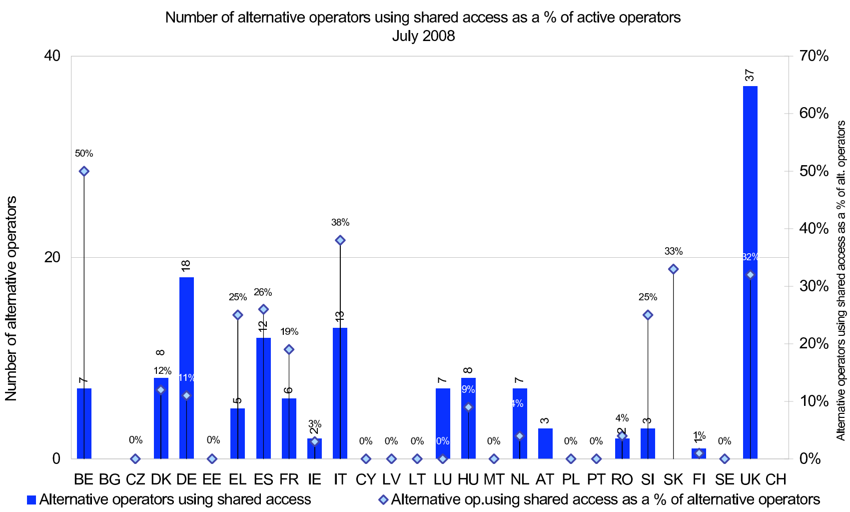
Data not available for Latvia.
Germany: 78 operators provide public voice telephony via proprietary infrastructure. Of those 30 are city carrier and 48 cable operators. However, only approximately 1% of all access lines from alternative operators is based on own infrastructure.
Lithuania: Proprietary infrastructure includes cable TV operators that provide fixed telephony.
Netherlands: there are approx. 50 small/local cable and FttH operators with proprietary infrastructure that offer voice
Austria: estimates for 2008.
Source for Switzerland: OFCOM Switzerland calculations. Data refer to December 2007

Figure 47



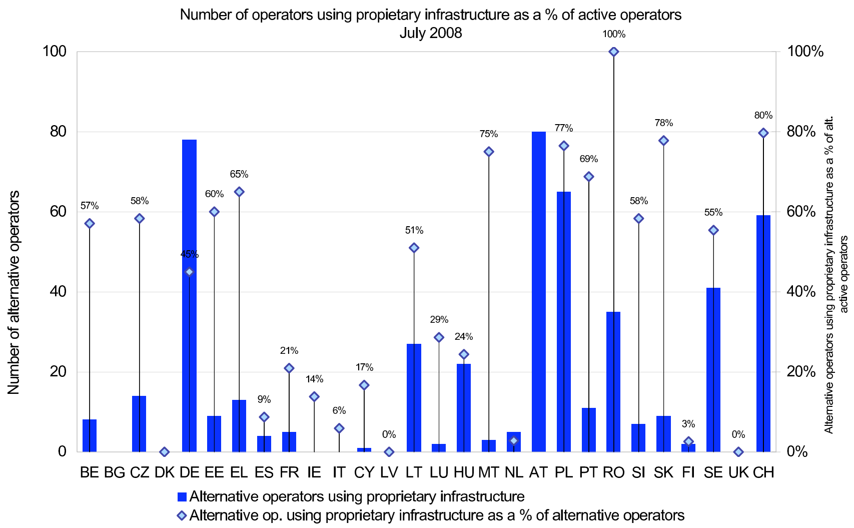
Belgium: The figures for LLU and shared access correspond to the number of agreements with the incumbent. Nine alternative operators have proprietary infrastructure.
Denmark: Total operators, providers of one or more of the following services: PSTN, ISDN2, ISDN30, FlexISDN, VoIP, CS and/or CPS. VoIP derived form MDA. Number of agreements between the incumbent and alternative operators. Information about whether these operators are actually offering public voice telephony through the LLU's is not available.
Germany: Figure based on contractual agreements (128) with the incumbent.
Spain: 2007 Figure for full LLU corrected.
Lithuania: Number of agreements between incumbent and alternative operators.
Austria: Estimates based on national data request for 2007.
Poland: Data on 15th May 2008.
Source for Switzerland: OFCOM Switzerland calculations. Data refer to December 2007

Figure 48



Germany: Figure based on contractual agreements (18) with the incumbent.
Poland: Data on 15th May 2008.
Source for Switzerland: OFCOM Switzerland. No shared access

Figure 49



Germany: A total of 78 operators provide public voice telephony via proprietary infrastructure. Of those are 30 city carrier and 48 cable operators. However, only approximately 1% of all access lines from alternative operators is based on own infrastructure.
Poland: Data as of 15th May 2008.
Austria: Estimates for 2008.
Source for Switzerland: OFCOM Switzerland calculations. Data refer to December 2007

2.4 Fixed number portability

Fixed number portability enables fixed subscribers to retain their number when they move from one operator to another.

Figures are provided by NRAs and refer to the number of transactions calculated up to 1st October each year, unless stated otherwise under each table.

Number portability is not yet in place in Bulgaria.

Fixed number portability has continued to play an important role in encouraging competition. As of October 2008, almost 24 million subscribers in 23 Member States have ported their number since the introduction of this possibility (more than 6.5 million from October 2007 and October 2008). Apart from the countries that have introduced fixed number portability only during 2007 (Malta and Slovakia), there has been significant growth in the amount of fixed numbers ported in Greece, Spain, France, Italy and The Netherlands.

Inter-operator prices for fixed number portability refer to the amount charged by the incumbent to the recipient operators for porting one telephone geographic number (excluding VAT). This price may vary depending on a number of factors. In some countries the price for a non - geographic number is different. Where available, information on price for non-geographic number portability is added in the footnote.

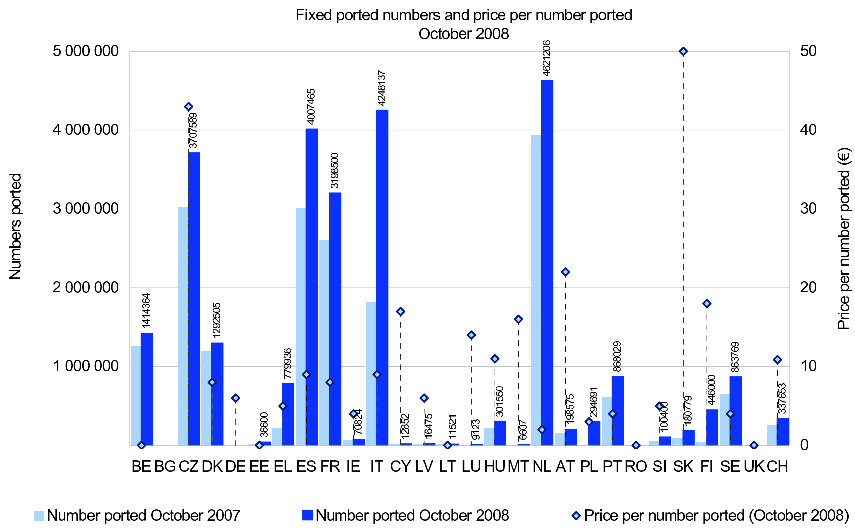
In Estonia, Lithuania, and Germany there is no charge for the porting of fixed numbers.

According to the data at our disposal for 23 Member States, the EU weighted average price as of October 2008 for a fixed number ported is € 6.7. Prices in Denmark, Malta, Austria, Portugal and Slovenia are significantly higher than the EU average, while in Estonia, Greece, Spain, France, Cyprus, Ireland, Luxembourg, Latvia, Hungary, Poland Slovenia, Slovakia and Finland prices are below €10.

Since the introduction of number portability in Switzerland in 2000, an annual increase in the number of ported numbers has been recorded, except between 2005 and 2006 where a decrease of 3.1% occurred. At the end of 2006 the proportion of ported numbers made up some 1.9% of the total number of fixed telephony subscriptions.

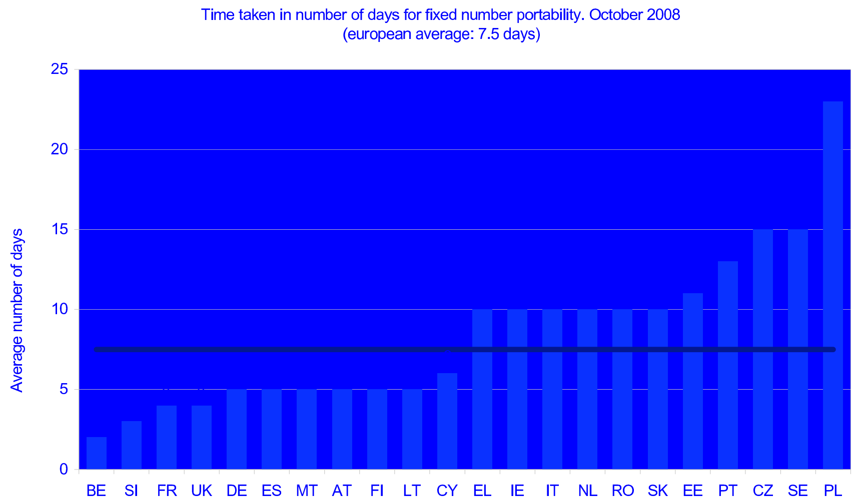
The prices charged in Switzerland (10.87 Euros) are around the middle of the table of the other European countries who charge for number portability. Eight European countries charge more for number portability, 13 charge less. Since January 2009, the price charged has been lowered to 7.67 euros.

Figure 50



(a)

Belgium: Simple installation: €4.69 per installation; complex installation €71.22 per installation
Bulgaria: Data not available.
Czech Republic: The price represents a single order.
Germany: The total number of ported numbers is not available.
Cyprus: Fixed ported numbers not available.
Romania: Fixed and mobile number portability is operational starting with 21st October 2008; the maximum regulated tariff is 13Euro/ fixed number ported.
Source for Switzerland: OFCOM Switzerland, Swisscom. Data regarded the ported numbers refer to December 2006 and 2007, the price to October 2008



(b)

Bulgaria: Fixed portability is not implemented yet.
Romania: Fixed mobile number portability available starting with 21st October 2008; the maximum regulated number of days for fixed portability is 10.
Source for Switzerland: no data available

2.5 Public voice telephony tariffs

This section examines the monthly rental charges and the main tariffs for public fixed voice telephony charged by the incumbent operators in each Member State in September 2008. The price trend over the past 11 years is also analyzed.

The incumbent operators are: Belgacom for Belgium, BTC for Bulgaria, Telefonica O2 for Czech Republic, TDC for Denmark, Deutsche Telekom for Germany, Elion for Estonia, OTE for Greece, Telefonica for Spain, France Telecom for France, Eircom for Ireland, Telecom Italia for Italy, CYTA for Cyprus, Lattelekom for Latvia, TEO LT for Lithuania, PT Luxembourg for Luxembourg, Magyar Telekom for Hungary, GO for Malta, KPN for the Netherlands, Telekom Austria for Austria, Polish Telecom for Poland, Portugal Telecom for Portugal, RomTelecom for Romania, Telekom Slovenije for Slovenia, Slovak Telecom for Slovakia, TeliaSonera for Finland, TeliaSonera for Sweden, and British Telecom for the United Kingdom.

The incumbent operators still retain a large market share, but new entrants/alternative operators are increasingly gaining market share by offering cheaper prices for certain types of calls (usually long-distance (national) or international) or destination and/or using chepaer technologies (IP). The prices charged by incumbents do not necessarily, therefore, represent the lowest prices available. A comparison between the rates charged by incumbents and alternative operators for a sample of countries is also shown.

The figures and information are taken from a study carried out for the Commission by Teligen, Strategy Analytics Ltd. The data are collected from primary sources (i.e. directly from the incumbent operators).

NRAs were given the possibility to check and validate these data before finalizing this report. In a few cases the NRAs have declined to comment on the data because of lack of insight into the operator’s pricing.

Different sets of charges for fixed national voice telephony services are shown in the following sections:

- the monthly rental charged by incumbent operators;
- the charges for a composite basket of calls (national, international fixed calls and calls to mobile), that gives an estimate of the average monthly spending by a typical “European business/residential user” for the whole range of calls;
- the charges for a basket of national calls, that gives an estimate of the average monthly spending by a typical “European business/residential user” for fixed national calls;
- the basket of international calls for each country that indicates the average charge for calls from the originating country to OECD destinations. In addition, the price of individual calls to specific destinations is also shown.
- the price of some individual calls (3- and 10-minute local, national and international calls) at peak time, inclusive of any initial charge. For those countries where unit-based charging is used, the price of a whole unit is calculated.

For the various types of calls, a benchmark based on a comparison with US and Japan is also included.

The EU average tariffs shown in the charts are weighted average (by population of the Member States). The following charts show the incumbent’s monthly line rental charges for residential and business users in September 2007 and September 2008. In order to reflect the real charges actually paid by users, values are expressed in €, including VAT for residential users and excluding VAT for business users.

A number of countries have different rental charges for business and residential customers.

In some countries the monthly rental will depend on where in the country the line is connected. The charges shown are for the capital/most densely populated area.

2.5.1 Monthly rental charged by the incumbent operators

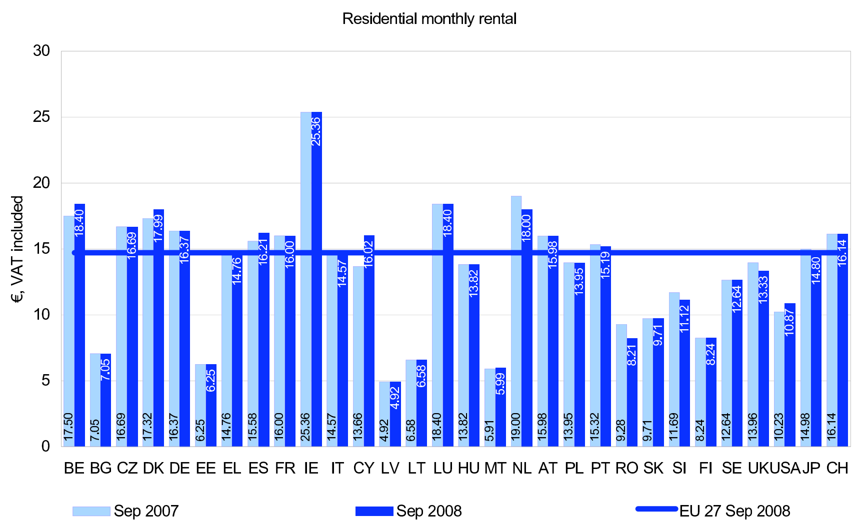
The following charts show the incumbent's monthly line rental charges for residential and business users in September 2007 and September 2008. In order to reflect the real charges actually paid by users, values are expressed in €, including VAT for residential users and excluding VAT for business users.

A number of countries have different rental charges for business and residential customers.

In some countries the monthly rental will depend on where in the country the line is connected. The charges shown are for the capital/most densely populated area.

In Switzerland, the monthly charge for an analogue connection (Economy Line) is CHF 25.25, including 7.6% VAT, which corresponds to 16.14 Euros. The EU average (14.7), as well as the Swiss price is stable compared to September 2007.

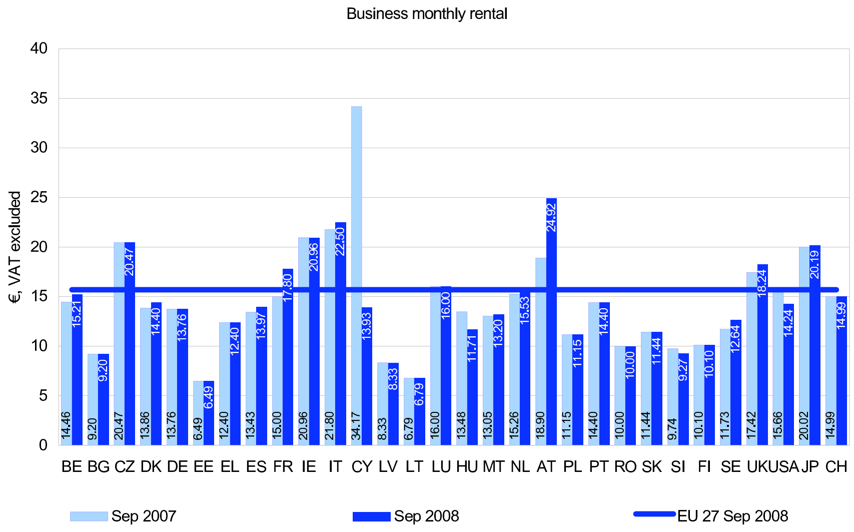
Figure 51



Sources for Switzerland: Telecom operators

With regard to the price of an analogue business line excluding VAT, Switzerland is well placed in the international comparison, with the price charged slightly below the weighted average of the 27 Union countries (14.99 Euros vs. 15.7 Euros).

Figure 52

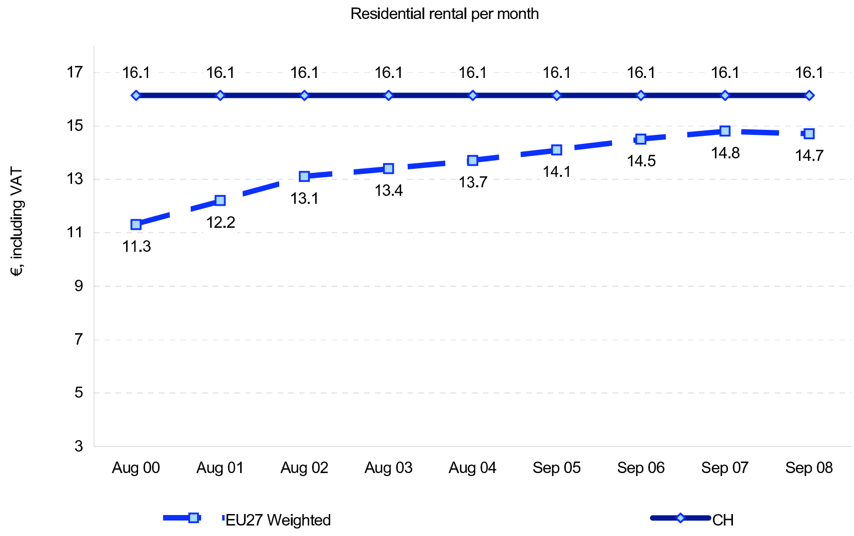


Sources for Switzerland: Telecom operators

The following charts show the EU weighted average variation in nominal terms of the residential and business monthly line rental charge.

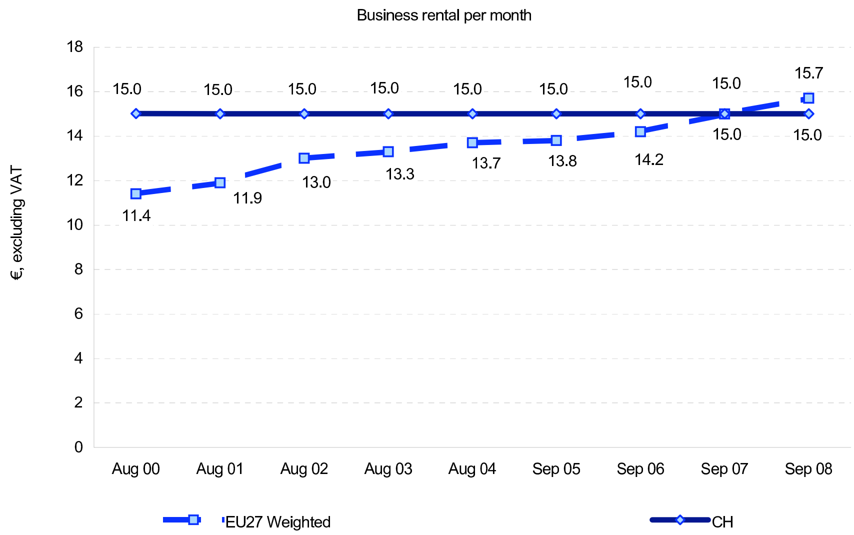
The same charts have been produced for Switzerland. Since the liberalisation of the telecommunications market, which generally took place in 1998, line prices have gradually increased in the European Union countries. This phenomenon is known as tariff readjustment. Its origin lies in the fact that lines were generally subsidized by revenue from calls. However, what was possible or even desirable in a monopoly is no longer the case in a market which is supposed to be competitive and it became imperative to adapt prices to reflect actual costs. In Switzerland, this kind of readjustment has not been observed; the only recorded changes were due to increases in VAT (increasing from 6.5% to 7.5% on 1 January 1999 and from 7.5% to 7.6% on 1 January 2001). VAT in Switzerland has remained at 7.6%. We note that the absence of increases in Switzerland has had the positive effect of closing the gap which separates Switzerland from its neighbours. Business line rentals are now even cheaper in Switzerland than in the EU.

Figure 53



Sources for Switzerland: Telecom operators

Figure 54



Sources for Switzerland: Telecom operators

2.5.2 Average monthly expenditure (composite call basket)

The figures presented in this section are intended to provide an estimate of the average monthly expenditure of a "standard" European consumer (business and residential). The Basket Methodology for Telecommunications Cost Comparison has been devised by the OECD and accepted in most countries as the most stable and neutral method of comparison.

The user is assumed to have a contract for the provision of voice telephony services with the incumbent operator and to use only this operator for all types of calls (local, national, international, calls to mobile). Since consumers are making increasing use of call-by-call carrier selection, in particular for specific highly discounted types of calls (i.e. international and national), the figures given below are purely indicative, and do not necessarily reflect the cheapest solution available.

The charts below show the average monthly expenditure for standard residential and business users as of September 2007, expressed in Euro, based on the standard tariffs charged by the incumbent operators (i.e. excluding any discount packages). This means that lower costs can be achieved if the user subscribes to one or more discounted packages.

The basket of calls used to estimate average monthly expenditure is the "2000 composite OECD basket" which includes fixed national calls, international calls and calls to mobile networks.

The OECD residential/business baskets are defined as follows (on an annual basis):

- The fixed (i.e. non-recurring) charges include the annual line rental charge plus the charge for the installation of a new line (depreciated over 5 years). Fixed charges for residential users include VAT, while for business users VAT is excluded.
- The usage charge for residential users refers to a basket of 1.200 national calls to fixed lines, plus 120 calls (with an average duration of 2 minutes) to mobile networks (representing 10% of the number of calls to fixed lines), plus 72 international calls (representing 6% of the number of calls to fixed lines). The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 2.5 to 7 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. Only 36% of the calls are within normal business hours; 74% are for distances below 10 km; 9% are for distances above 100 km.
- The usage charge for business users refers to a basket of 3 600 national calls to fixed lines plus 360 calls (with an average call duration of 2 minutes) to mobile networks, plus 216 international calls. The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend), and with a call duration of 3.5 minutes regardless of time of day and distance. The usage for business users is weighted towards business hours, and with typically short calls. Over 86% of the calls are within normal business hours; 64% are for distances below 10km; 12.5% are for distances above 100 km.

A full description of the methodology can be found at the end of this report.

There was a revision of the OECD baskets in February 2006.

Highlights of the new 2006 OECD baskets are:

- Five new baskets for Low, Medium and High residential usage and business baskets for SOHO and SME usage;
- Fixed to Mobile calls now include calls to up to 4 national mobile networks, weighted by subscriber numbers;
- A range of tariff packages from the incumbent operator are now included, with automatic selection of the cheapest package for each basket;
- Traffic weights and volumes have been updated with recent information.

Low usage residential basket: The usage charge for low usage residential users refers to a basket of 600 calls, where 76% (456 calls) are to national fixed lines, 19% (114 calls) are to mobile networks, and 5% (30 calls) are to international destinations. The usage for residential users is weighted towards off-peak hours, and with typically long calls. 58% of the calls are within normal business hours; 76.5% are for distances below 10 km; 7% are for distances above 100 km.

Medium usage residential basket: The usage charge for low usage residential users refers to a basket of 1200 calls, where 75% (900 calls) are to national fixed lines, 23% (276 calls) are to mobile networks, and 2% (24 calls) are to international destinations. The usage for residential users is weighted towards off-peak hours, and with typically long calls. 55.5% of the calls are within normal business hours; 70% are for distances below 10 km; 11.5% are for distances above 100 km.

High usage residential basket: The usage charge for low usage residential users refers to a basket of 2400 calls, where 65% (1560 calls) are to national fixed lines, 31% (744 calls) are to mobile networks, and 4% (96 calls) are to international destinations. The usage for residential users is weighted towards off-peak hours, and with typically long calls. 60.5% of the calls are within normal business hours; 78% are for distances below 10 km; 7% are for distances above 100 km.

The usage charges for national calls to fixed lines for residential users are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 3.7 to 7 minutes, depending on time and distance.

SOHO business basket: The usage charge for low usage residential users refers to a basket of 1800 calls, where 67% (1206 calls) are to national fixed lines, 29% (522 calls) are to mobile networks, and 4% (72 calls) are to international destinations. The usage for business users is weighted towards business hours, and with typically short calls. 79% of the calls are within normal business hours; 68.5% are for distances below 10 km; 12.5% are for distances above 100 km.

SME business basket: The usage charge for low usage residential users refers to a basket where 30 users each have 2800 calls, where 72% (2016 calls) are to national fixed lines, 20% (560 calls) are to mobile networks, and 8% (224 calls) are to international destinations. The usage for business users is weighted towards business hours, and with typically short calls. 81% of the calls are within normal business hours; 70.5% are for distances below 10 km; 11% are for distances above 100 km.

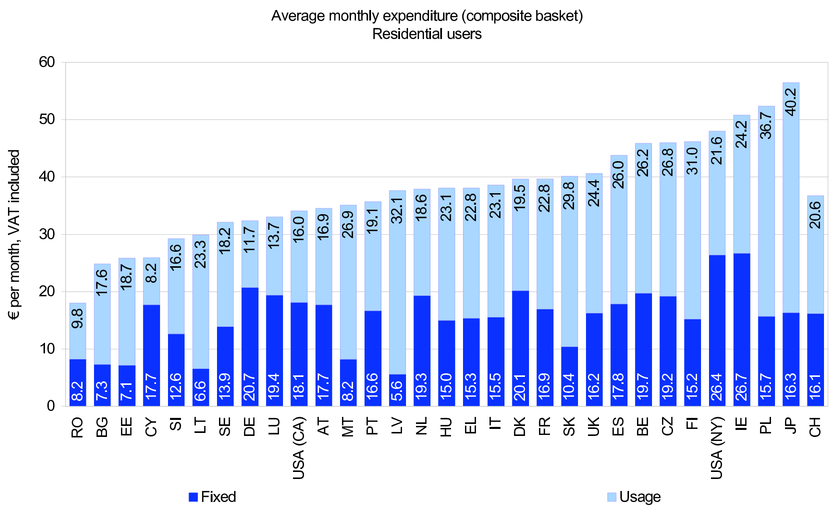
The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 1.9 to 3.1 minutes, depending on time and distance.

The different 2006 OECD baskets may select different tariff packages as the cheapest. The revision brought a new element into the baskets, namely the inclusion of more tariff packages for each country. This allows for a comparison of the ”standard” package with the ”cheapest” package.

2000 composite OECD basket

On the basis of the basket established by Teligen, Swiss residential users pay 36.7 Euros per month for a standard range of services. Figure 54 shows that Switzerland is positioned near the European average. In 16 European countries (out of 27) the cost of the basket is higher. We also note that Japan, a non-European country considered, is among the least attractive countries.

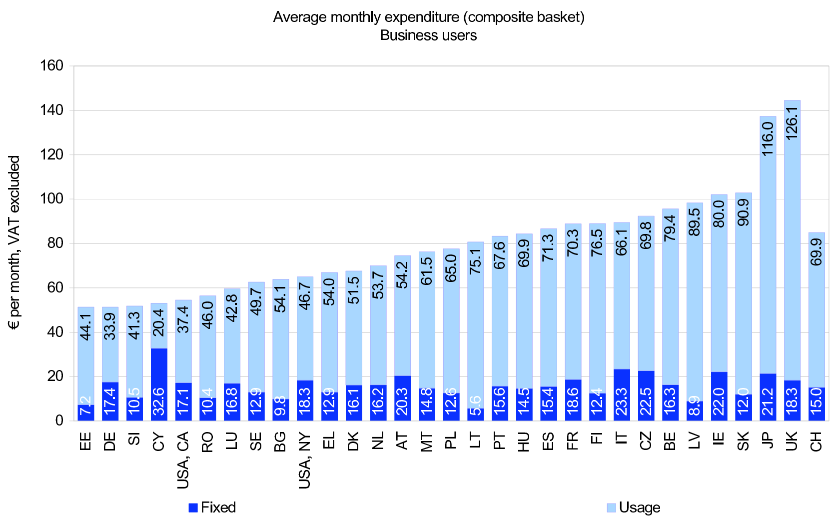
Figure 55



Source for Switzerland: Teligen T-Basket

The same exercise was carried out for businesses and the results are displayed in Figure 56. The cost of a standard basket of services in Switzerland is 84.9 Euros. The United Kingdom and Japan are at the bottom of the table. One very interesting fact is that the results for businesses have a greater spread than those for residential users. This would appear to indicate very diverse practices in the different countries in terms of product segmentation.

Figure 56

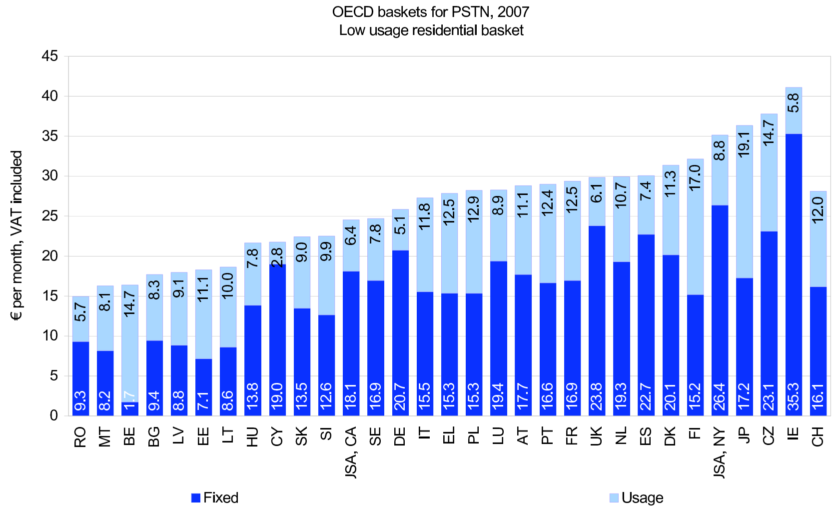


Source for Switzerland: Teligen T-Basket

2006 OECD baskets

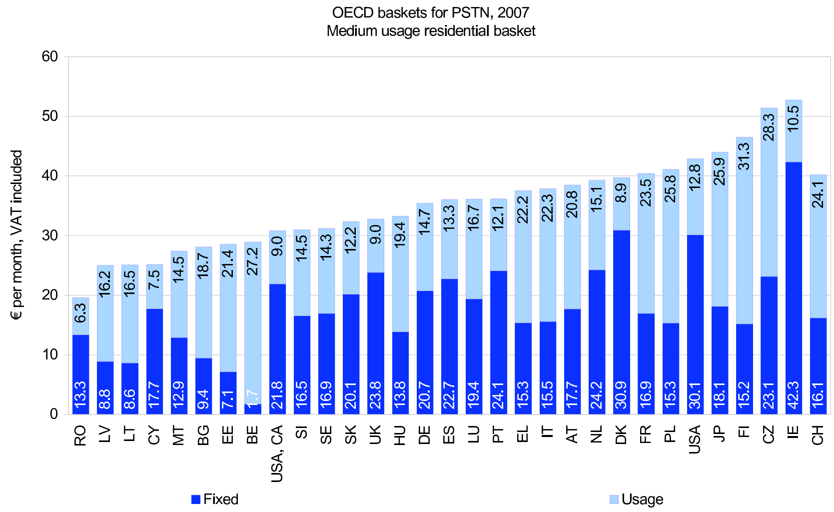
In Switzerland, residential users pay 28.1 Euros for a low usage basket (Figure 57), placing them in the middle of the European table. The cost of the medium usage residential basket (Figure 58) in Switzerland (40.2 Euros) is among the six highest in Europe. For the high usage basket, at 69.2 Euros Switzerland is one of the most expensive countries, with only Finland, Ireland and the Czech Republic charging more (Figure 59). With a monthly charge of 44.5 Euros, excluding VAT, Switzerland is ranked 7th in terms of the most expensive European SOHO business baskets (Figure 60). Swiss business users pay 1642.67 Euros, excluding VAT, for the SME basket (Figure 61) which ranks Switzerland 9th in Europe.

Figure 57



Source for Switzerland: Teligen T-Basket

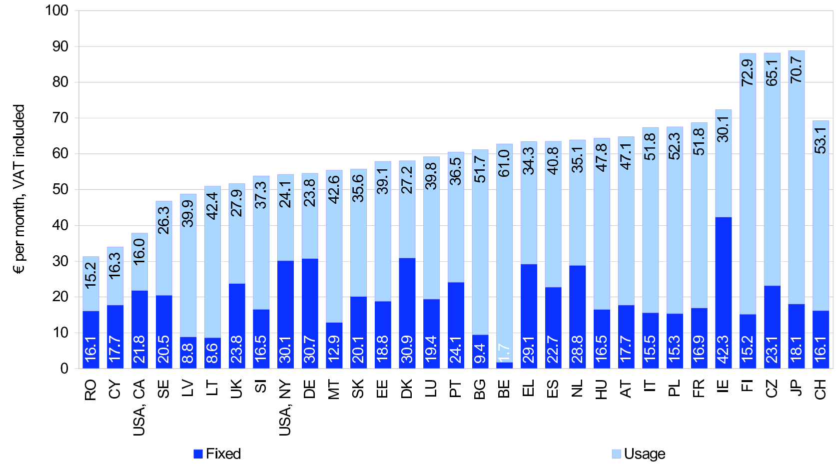
Figure 58



Source for Switzerland: Teligen T-Basket

Figure 59

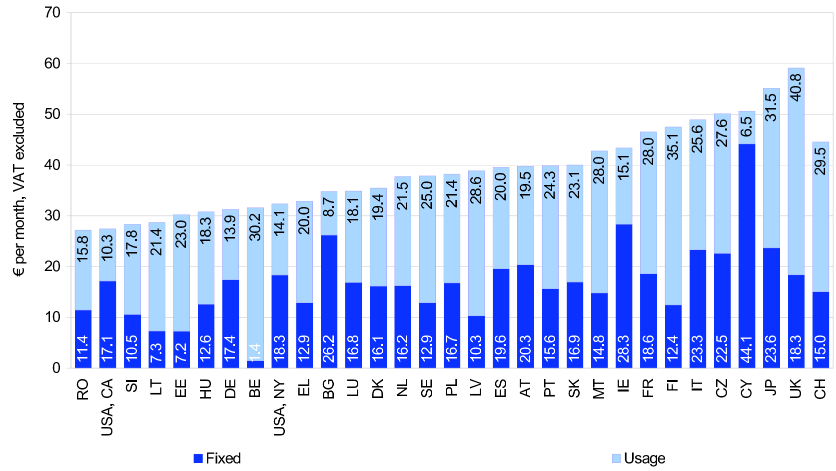
OECD baskets for PSTN, 2007
High usage residential basket



Source for Switzerland: Teligen T-Basket

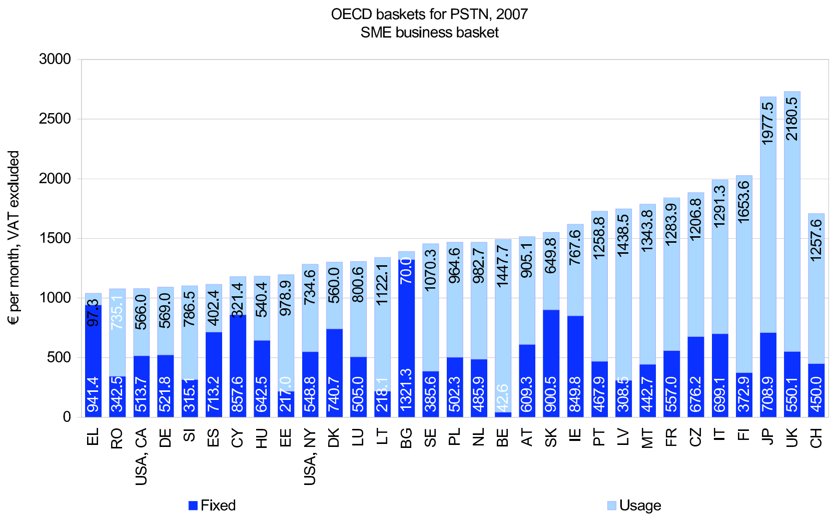
Figure 60

OECD baskets for PSTN, 2007
SOHO business basket



Source for Switzerland: Teligen T-Basket

Figure 61



Source for Switzerland: Teligen T-Basket

Comparison of the "standard" package with the "cheapest package"

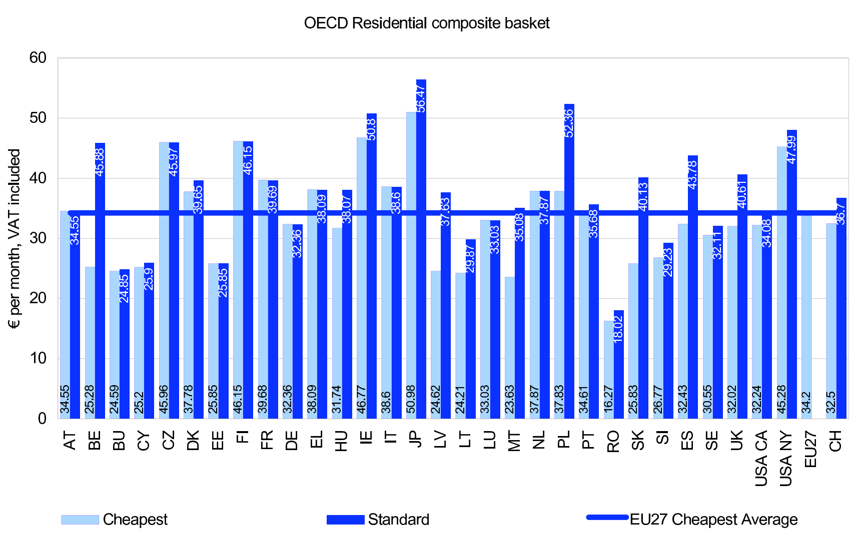
Total cost for "standard" package is compared with the equivalent cost for the "cheapest" package.

As some operators do not clearly publish a range of discount package options, only standard package is included in such cases.

In Switzerland there is a modest difference between the cheapest and the standard baskets, for both residential and business users. For residential users the "cheapest" basket costs 32.5 Euros while the "standard" basket costs 4.2 Euros more. For business users the cost is 72.9 Euros for the "cheapest" basket with the "standard" costing an additional 12 Euros. The biggest differences between "cheapest" and "standard" baskets were recorded in Belgium (over 20 Euros for residential users) and in Slovakia (over 53 Euros for business users).

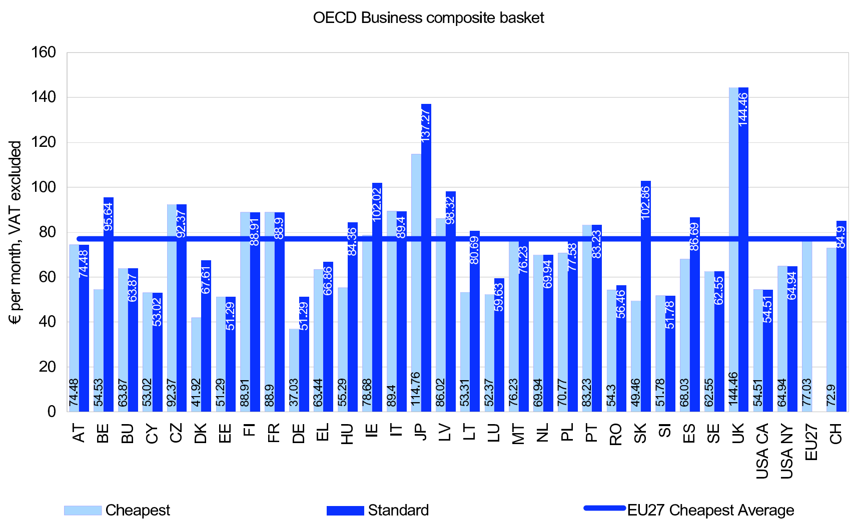
The "cheapest" residential as well as business basket in Switzerland is below the EU25 average (32.5 and 72.9 Euros, respectively). The highest residential tariff packages were recorded in Japan, while Romania had the lowest. For the business composite basket, the UK and Japan are the most expensive and Germany is the cheapest country.

Figure 62



Source for Switzerland: Teligen T-Basket, OFCOM Switzerland calculations

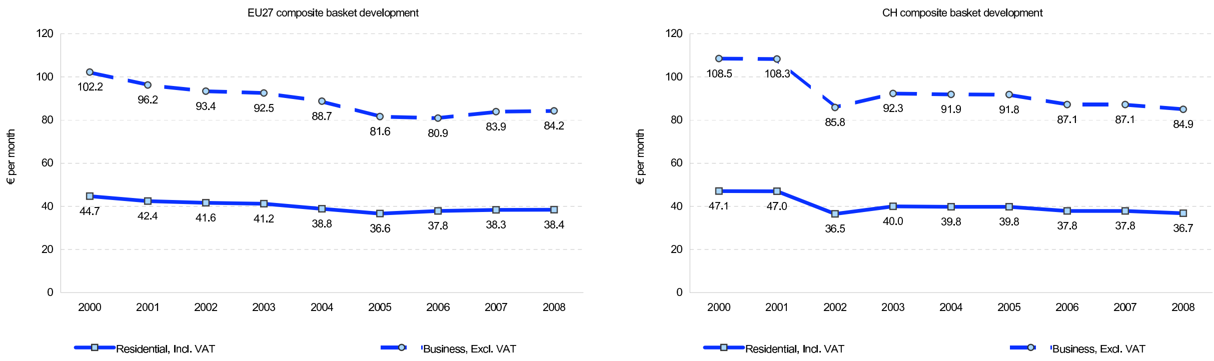
Figure 63



Source for Switzerland: Teligen T-Basket, OFCOM Switzerland calculations

2.5.3 Trend of the basket for fixed national calls (composite basket)

Figure 64



(a) (b)

Source for Switzerland: Teligen T-Basket

2.5.4 Incumbent operator price for an average fixed international call (international call basket)

The basket of international calls for each country provides an estimate of the average cost of an international call.

For the basket comparison of international PSTN call charges, the OECD traffic weight basket methodology is used. The basket calculates an average charge for calls to all OECD destination countries.

The residential basket includes VAT. Call charges are weighted between peak and off-peak hours: 25% for peak hours and 75% for off-peak hours. The business basket excludes VAT. Call charges are weighted 75% for peak hours and 25% for off-peak hours. International call charges vary widely with the destination, and the basket results are based on a weighted average call charge. Traffic weighting is used, as defined by the OECD for the destination weighting, as per the revision in 2000. This method applies a weight to each destination based on the traffic volumes reported on that route (ITU statistics).

All tariffs are standard prices from incumbent operators, and both these operators and new entrants may offer lower prices.

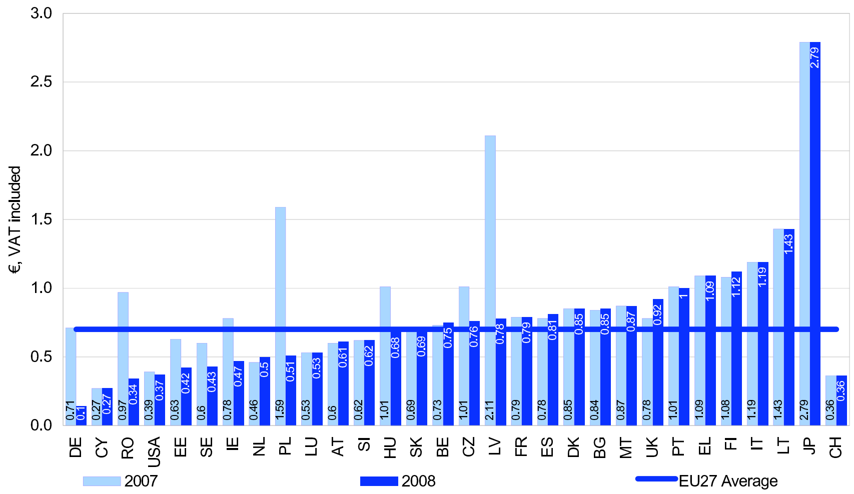
The EU average value is the average of the EU countries weighted according to the national population.

A full description of the methodology can be found at the end of this report.

In terms of the cost of international calls, Switzerland is in an exceptional position as only three countries have more attractive prices, either for residential (Figure 65) or for businesses users (Figure 66), with the prices charged being well below the weighted European average. For a country such as Switzerland, with an export tradition, this situation is encouraging. Japan, with prices which literally go through the roof, is at the other end of the league table. Moreover, as Figure 67 shows, the prices in Switzerland have been low for a long time now, whereas the average price in the Union is still falling and has not yet reached the Swiss level. In Switzerland, competitive pressure exerted by the new entrants had some very rapid and marked effects between 1998 and 2000; prices fell by almost 80%, regardless of the type of user (business or residential). Since then, the recorded fall has been negligible.

Figure 65

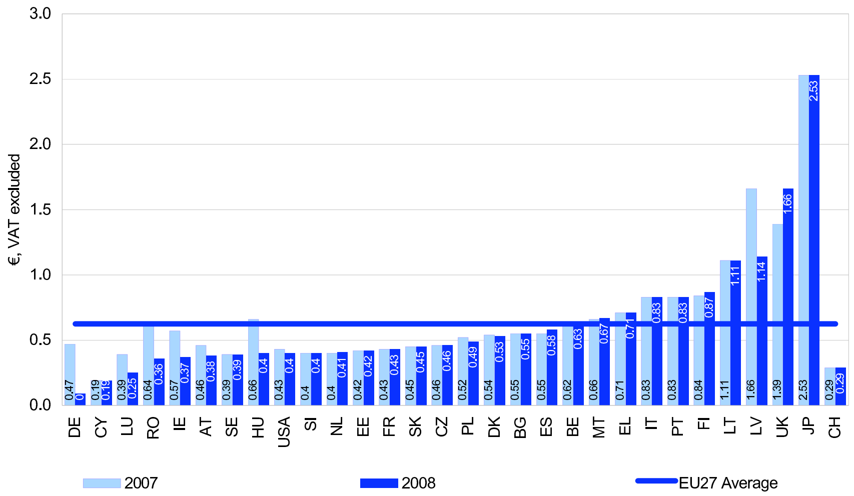
Average price for an international call, residential users



Source for Switzerland: Teligen T-Basket

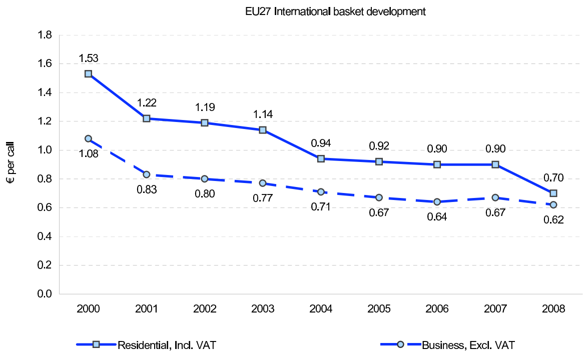
Figure 66

Average price for an international call, business users

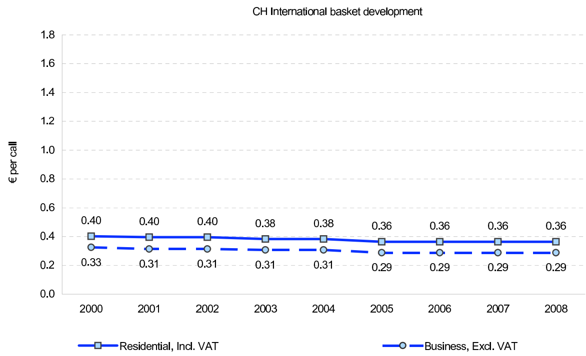


Source for Switzerland: Teligen T-Basket

Figure 67



(a)



(b)

Source for Switzerland: Teligen T-Basket

2.5.5 Price of fixed national calls by the incumbent operator

Prices charged by the incumbent operators for individual fixed national calls

This section shows the prices charged by the incumbent operators for individual fixed calls (the same call prices apply to business and residential users). For those countries where unit based charging is used, the cost of the amount of full units is calculated. Any call set-up charges, minimum charges and/or call specific duration allowances have been taken into account.

Prices refer to peak hours (weekdays 11:00 am) and are expressed in euro-cents including VAT. Except where otherwise specified, the figures refer to September 2007. Prices are indicated for three-minute and ten-minute calls over two distances: 3 km (equivalent to a local call) and 200 km (equivalent to a national call). In several countries the tariff changes at exactly one of these distances: in these cases, the rates for the lower distance band are used.

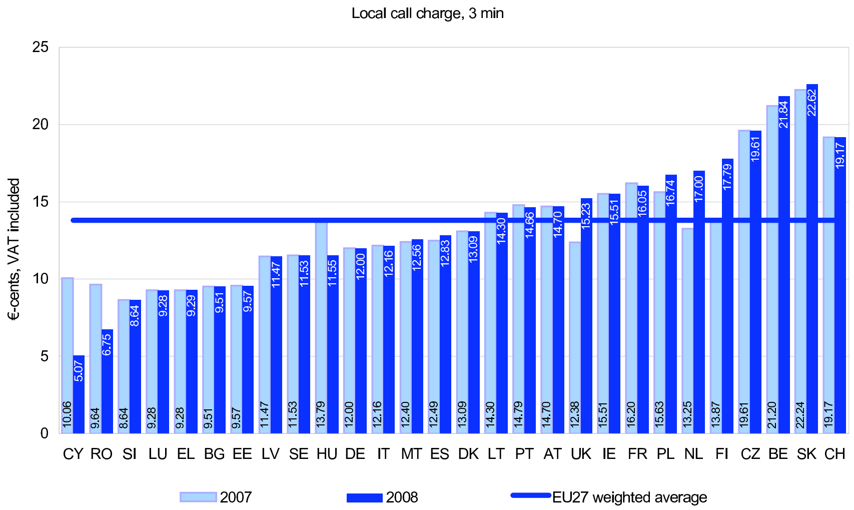
The price of a three-minute call is more affected by the magnitude of the call set-up charge than the price of a ten-minute call.

Where different tariff packages exist, the basic, residential package is selected. Otherwise the standard tariff is used. No discount packages are taken into account.

The EU average value is the average of the EU countries weighted according to the national population.

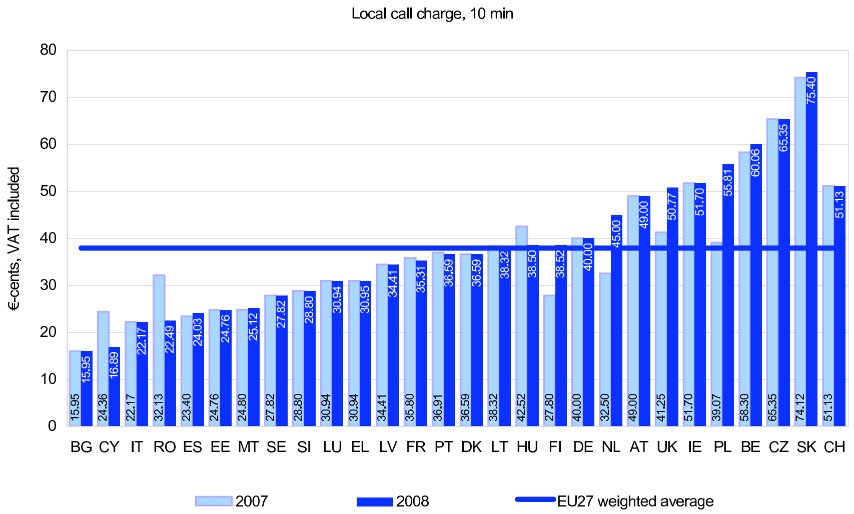
Regardless of call duration (3 or 10 minutes), the prices charged for local calls in Switzerland are clearly above the EU27 weighted average. For a 3-minute local call (Figure 68), prices are higher only in Belgium, Slovakia and the Czech Republic. The situation is slightly different for a 10-minute call (Figure 69), with five countries applying higher tariffs. Switzerland's poor performance is attributable to the introduction in 2002 of a single national rate which is independent of distance. Following the introduction of this new method of charging, the price of local calls increased whilst that of national calls decreased.

Figure 68



Sources for Switzerland: Telecom operators

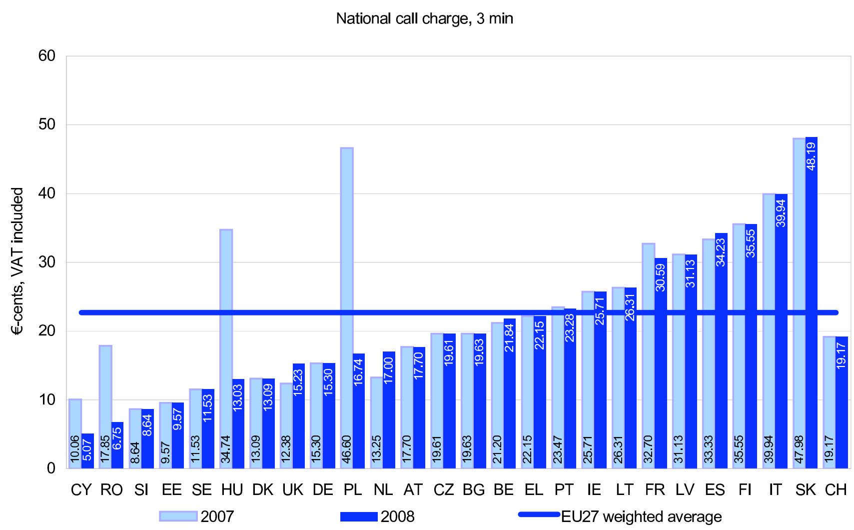
Figure 69



Sources for Switzerland: Telecom operators

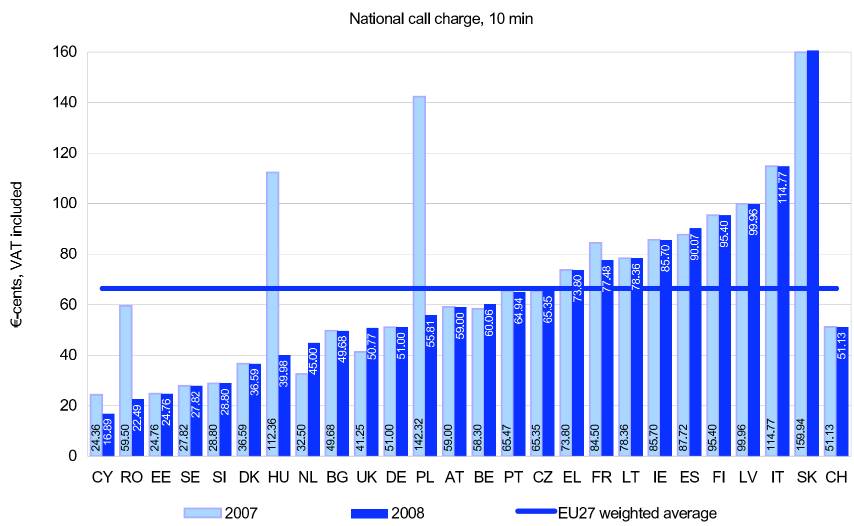
With regard to prices charged for national calls (Figures 70 and 71), Switzerland is well placed in an international comparison. Swiss users are charged 19.17 Euro cents for a 3-minute call and 51.13 Euro-cents for a 10-minute call. Indeed, regardless of call duration, Swiss prices are clearly below the EU27 weighted average (22.7 and 66.4 Euros, respectively). In 2008, the lowest national prices were recorded in Cyprus, for both 3-minute and 10-minute calls (5.07 and 16.89, respectively), with Slovakia the most expensive country regardless of call duration.

Figure 70



Sources for Switzerland: Telecom operators

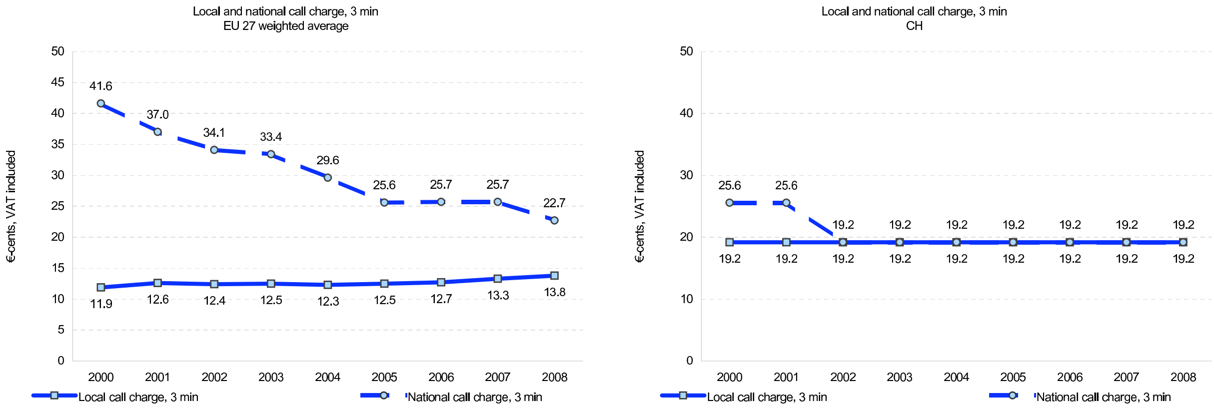
Figure 71



Sources for Switzerland: Telecom operators

Figure 72 shows the evolution of prices for local and national 3-minute calls in the European Union countries and in Switzerland from 2000 to 2008. With regard to local call prices, it should be noted that they remained fairly stable for both 3-minute and 10-minute calls throughout the period in question. On the other hand, the prices for a national 3-minute call fell in the EU. Since the introduction of the single national tariff in Switzerland (2002) the price has not changed. Whereas prices remained practically unchanged in the EU between 2005 and 2007, a decrease was recorded in 2008. One can draw similar conclusions from the analysis of the trend in prices for 10-minute calls shown in Figure 73.

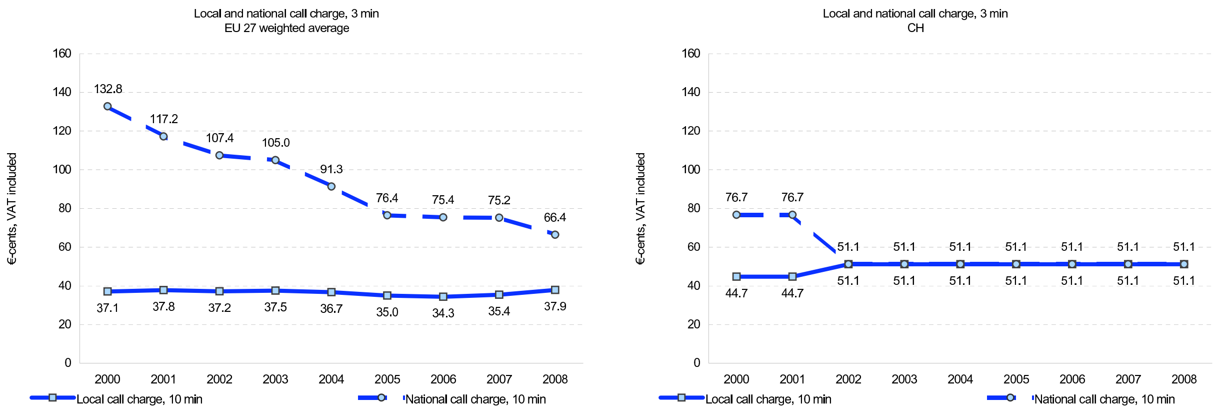
Figure 72



(a) (b)

Sources for Switzerland: Telecom operators

Figure 73



(a) (b)

Sources for Switzerland: Telecom operators

2.5.6 Price of fixed national calls by alternative operators

This section compares the prices charged for public voice telephony services by the incumbent operators and by the largest competitor in each Member State. The tariff packages selected will impact on this comparison, although care has been taken to ensure reasonable comparability.

In Switzerland, the comparison was made with Swisscom's main competitor, Sunrise, though this does not automatically mean that it represents the cheapest alternatives available to consumers. The prices are those of October 2008 and correspond to the peak rates. If one compares the price of a 3-minute local or national call (Figures 74 and 76), Sunrise charged 20% less. The same comparison made for a 10-minute call (Figures 75 and 77) shows that Sunrise's prices were 10% lower than Swisscom's. It should be noted that this narrowing of the difference is largely explained by the fact that the two operators do not apply the same charging systems. Swisscom applies a unit-based charging system (CHF 0.10

per x seconds) and Sunrise charges by the second; the results are therefore dependent on the choice of the exact number of minutes on which the comparison is based. In fact, if the number of minutes considered corresponds to the precise moment at which the switch to the next additional unit occurs, Swisscom's prices are comparatively less attractive. We further note that since Switzerland has only distance-independent prices, the national prices for Switzerland are placed in the middle of the other operators' national tariffs and the Swiss local prices lie above the EU average.

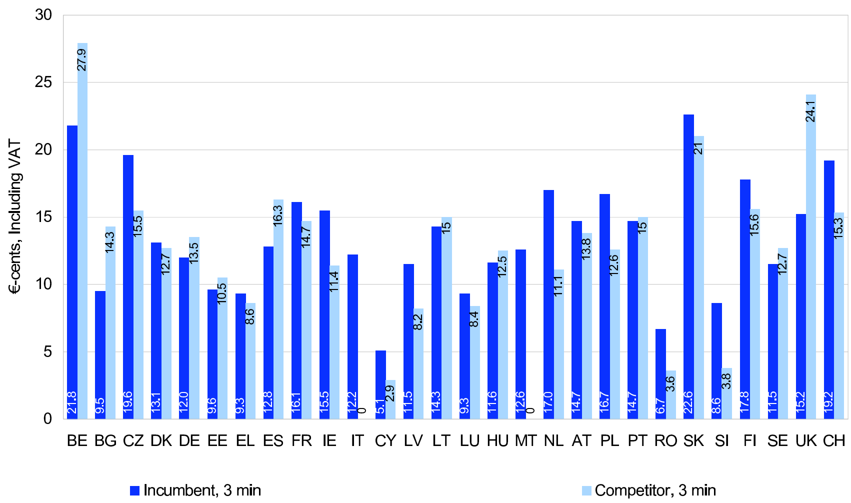
In this report the following second largest operators have been covered for the year 2007. In some cases there has been a change of "second operator" from last year, and these are marked with an *.

	Second largest	**Competing service type**
Belgium	Telenet	PSTN / IP
Bulgaria	Orbitel	IP
Czech	Republic Ceské Radiokomunikace	PSTN / IP
Denmark	Tele2	PSTN
Germany	Arcor	PSTN
Estonia	Starman	IP
Greece	Tellas	PSTN
Spain	Ono	Cable
France	NeufCegetel	PSTN
Ireland	BT	PSTN
Italy	Wind	PSTN
Cyprus	CallSat	?
Latvia	Telecom Baltija	PSTN / IP
Lithuania	Eurocom *	PSTN
Luxembourg	Tele2	PSTN
Hungary	Tele2	PSTN
Malta	—	—
Netherlands	Pretium	PSTN
Austria	Tele2	PSTN
Poland	Tele2	PSTN
Portugal	Sonaecom (Novo Optimus)	PSTN
Romania	RCS	RDS
PSTN		
Slovakia	GTS Nextra	PSTN / IP
Slovenia	T-2	IP
Finland	Elisa	PSTN
Sweden	Tele2	PSTN
UK	Virgin	PSTN / IP
CH	Sunrise	PSTN

Looking at Figures 74 to 77, there are two more interesting general trends to be observed. The first is that there are still substantial price differences between the historic operator and its main competitor, which means that competition has not yet resulted in completely homogenised prices. The second lies in the fact that in certain countries, the alternative operator charges a higher price than the historic operator.

Figure 74

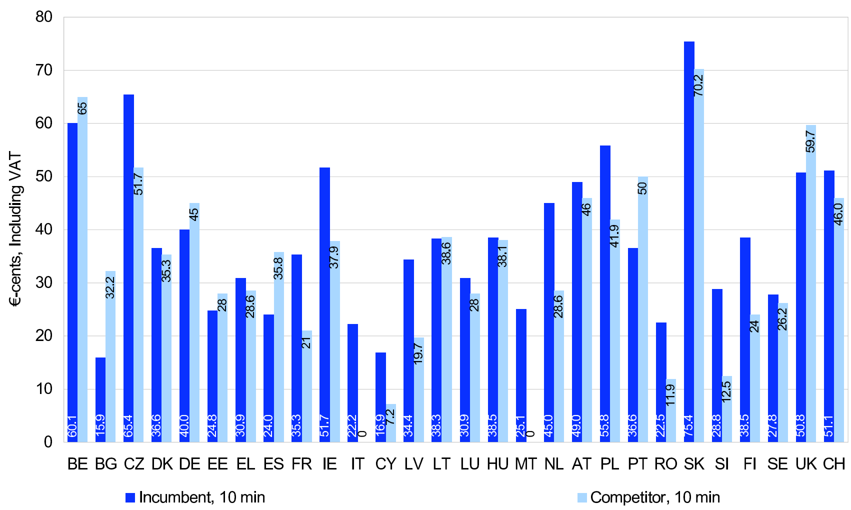
3 min local calls, incumbent and competitor's price



Sources for Switzerland: Telecom operators

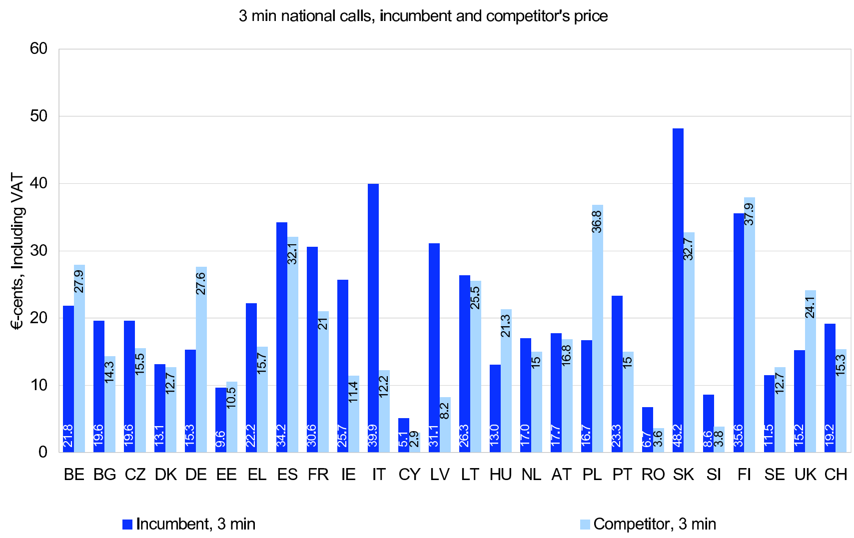
Figure 75

10 min local calls, incumbent and competitor's price



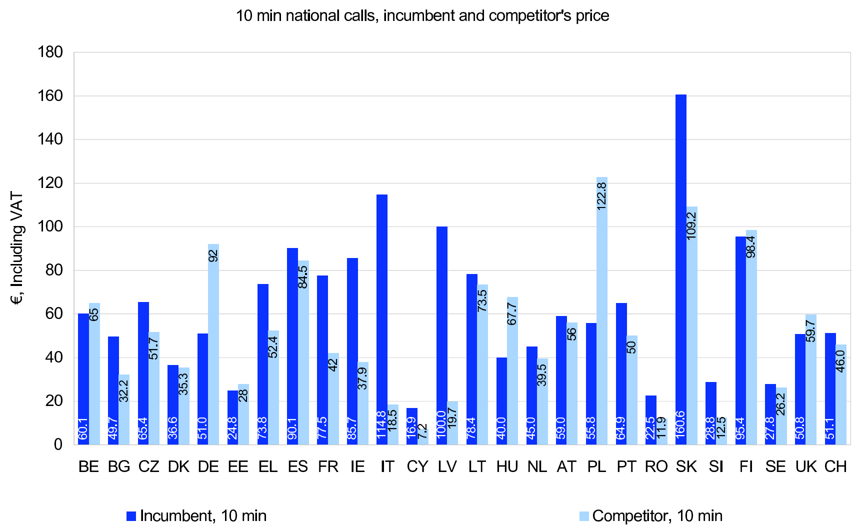
Sources for Switzerland: Telecom operators

Figure 76



Sources for Switzerland: Telecom operators

Figure 77



Sources for Switzerland: Telecom operators

2.5.7 Incumbent operator price of calls to EU, Japan, USA

The following charts show the prices of a 10-minute international call (including VAT) during peak hours (weekday 11:00 am) to four different destinations: Near EU country, Distant EU country, USA and Japan. Figures are expressed in Euro, including VAT, and they refer to the European incumbent operators and the EU weighted average.

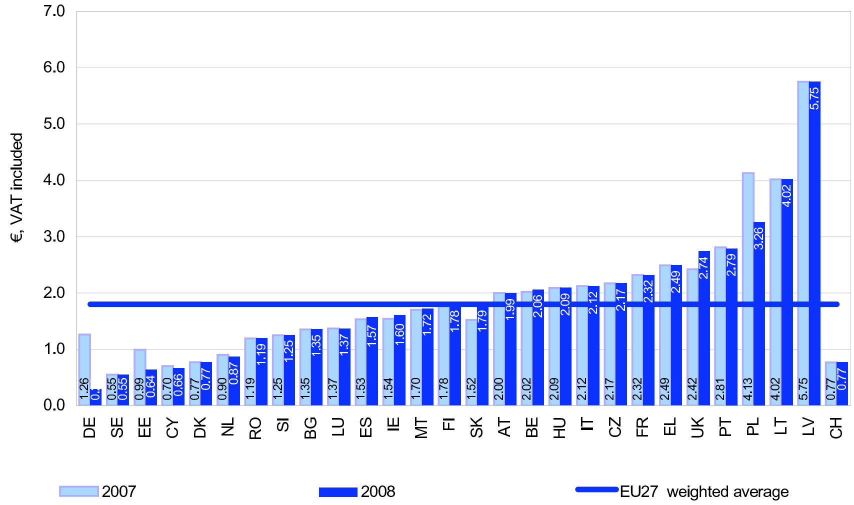
The table below summarizes the definition of near and distant EU destination countries.

From:	Near EU	Far EU
BE	FR	EL
BU	EL	PT
CZ	DE	FI
DK	SE	EL
DE	FR	EL
EE	FI	EL
EL	IT	DK
ES	PT	DK
FR	BE	EL
IE	UK	EL
IT	EL	DK
CY	EL	DK
LV	SE	EL
LT	SE	EL
LU	DE	EL
HU	AT	FI
MT	IT	FI
NL	DE	EL
AT	DE	EL
PL	DE	EL
PT	ES	DK
RO	HU	PT
SK	CZ	FI
SI	AT	FI
FI	SE	EL
SE	DK	EL
UK	FR	EL
CH	DE	EL

As far as calls to Switzerland's immediate neighbours (Figure 78) are concerned, Germany was assumed to be the closest country to Switzerland. It is apparent that in the international comparison a subscriber to the Swiss incumbent pays relatively little to make a 10-minute call to Germany (0.77 Euro). Switzerland is ranked fifth, together with Denmark. A subscriber to the Swiss incumbent pays the same price for a 10 minute call to the USA as for the same call to Germany (Figure 80). In this respect Swisscom is the fourth cheapest operator. Figure 79 shows the price of a 10-minute call made between each country examined and its most distant European neighbour. For Switzerland, this was deemed to be Greece. Once again, the situation turns out to be favourable in Switzerland, since it was well below the EU weighted average. A 10-minute call to Greece costs 1.6 Euros for a Swisscom subscriber. For a 10-minute call to Japan (Figure 81), the conditions in Switzerland are very attractive compared with the EU level. Switzerland is placed in the group of the five cheapest countries. The price is the same as for a distant European country, namely 1.6 Euros per 10-minute call.

Figure 78

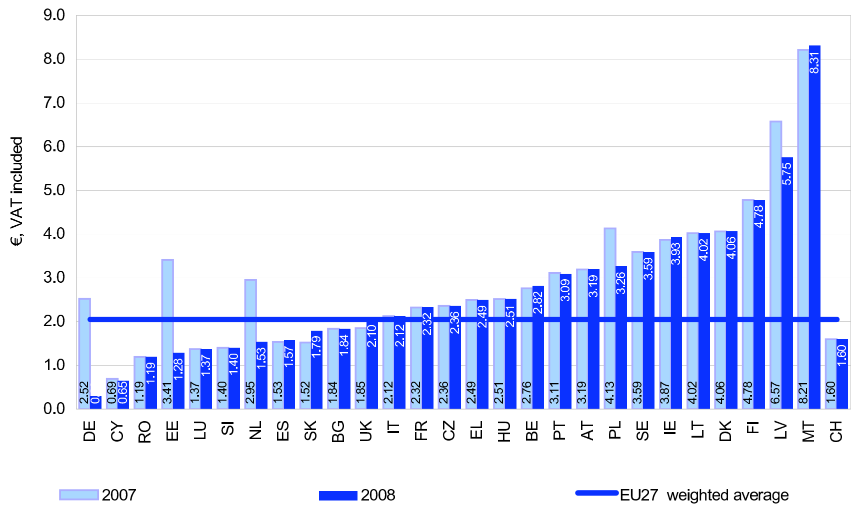
10 min call to near EU country



Sources for Switzerland: Telecom operators

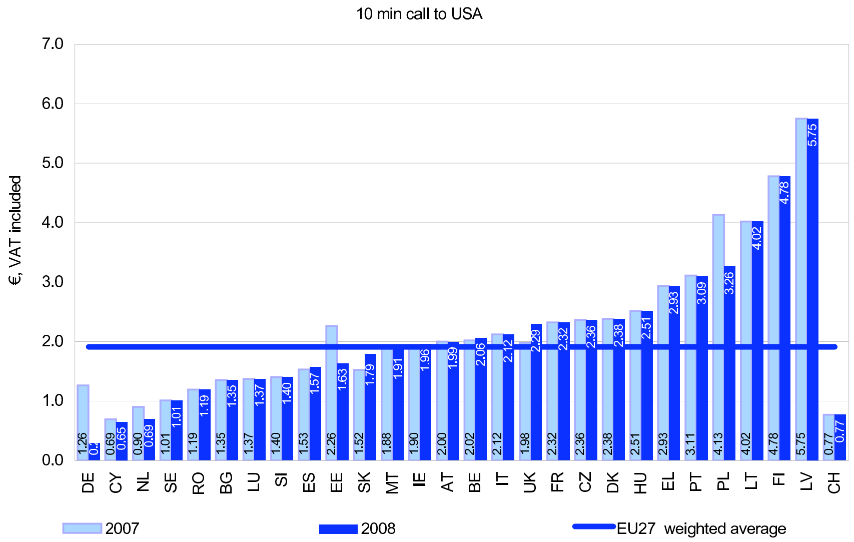
Figure 79

10 min call to distant EU country



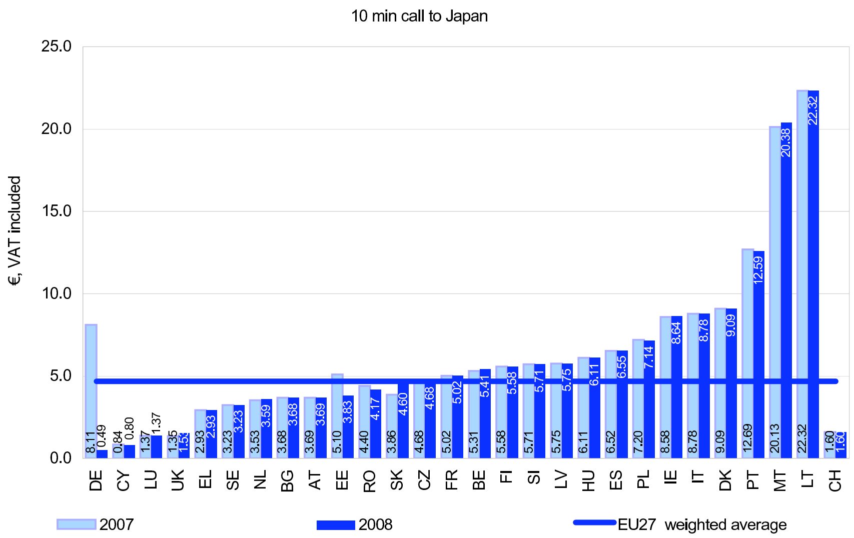
Sources for Switzerland: Telecom operators

Figure 80



Sources for Switzerland: Telecom operators

Figure 81



Sources for Switzerland: Telecom operators

2.5.8 Alternative operators' price for fixed international calls

The equivalent prices for competitor providers in the EU countries are shown in the charts below. One competitor per country has been analyzed. The prices are shown for a 10 minute call, at peak time weekdays. Prices include VAT and are applicable for September 2008.

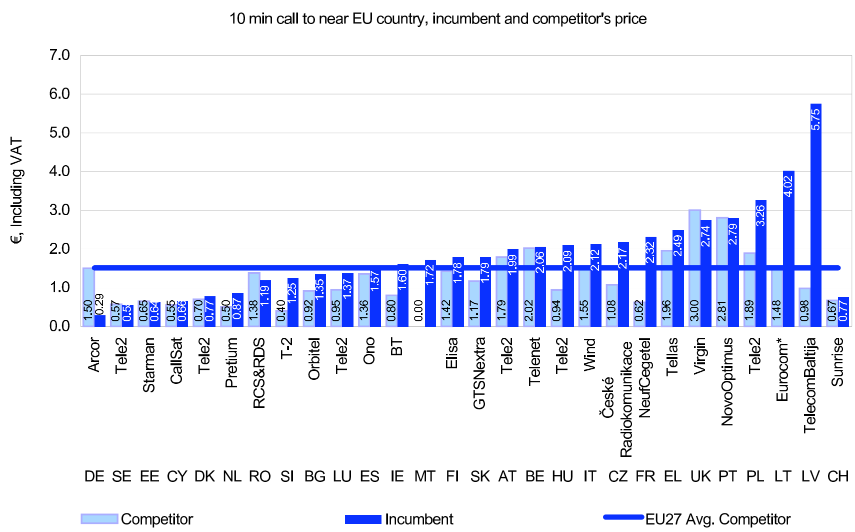
For Switzerland, the comparison was made with the prices charged by Sunrise, Swisscom's main competitor, which does not necessarily mean that they are the cheapest solutions available on the market.

As was shown in the preceding section, the prices charged in Switzerland are well below the European average and it is extremely rare to find more advantageous conditions. In spite of the very low prices billed by the dominant operator, it is still possible for a Swiss user to benefit from the substantial advantages available from the competition. Thus the difference for a 10-minute call with the main alternative operator is:

- -13.0% for a call to the nearest neighbour country or to the USA (Figures 82 and 84);;
- -16.25% to the most distant EU member country (Figure 83);

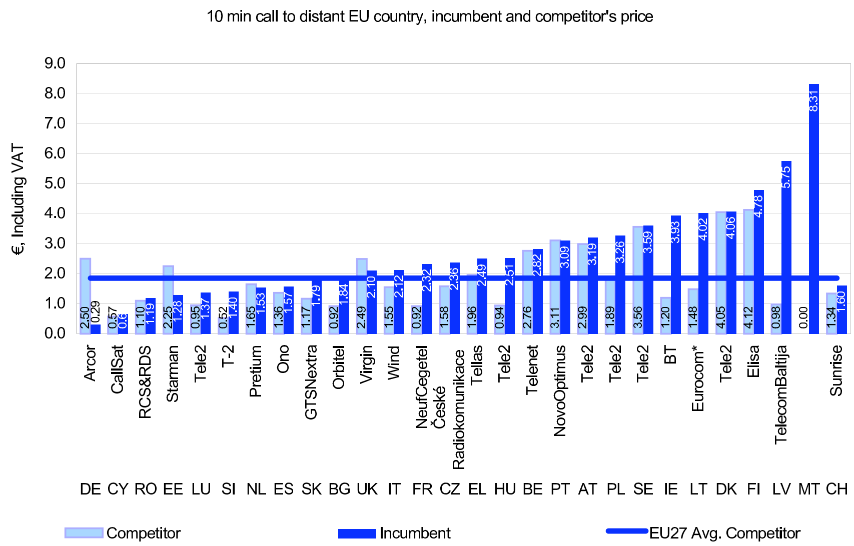
Only for the example of a call to Japan does Sunrise charge higher prices than Swisscom -90% higher (Figure 85).

Figure 82



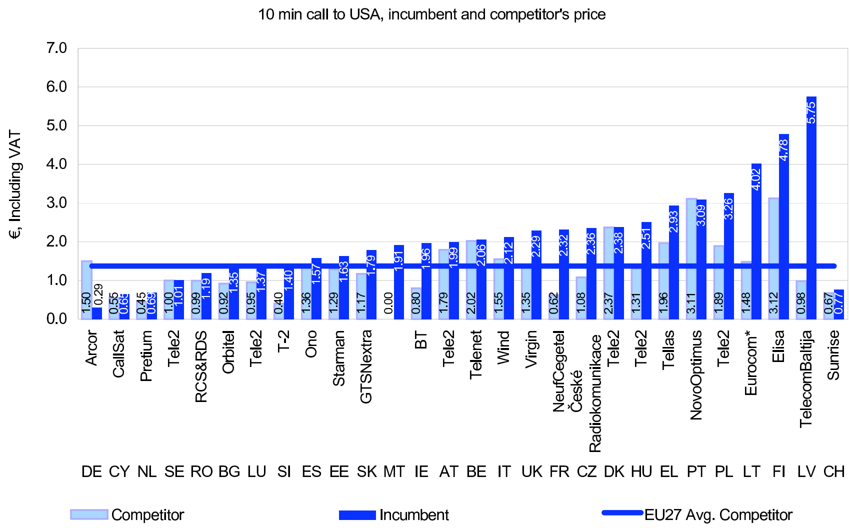
Sources for Switzerland: Telecom operators

Figure 83



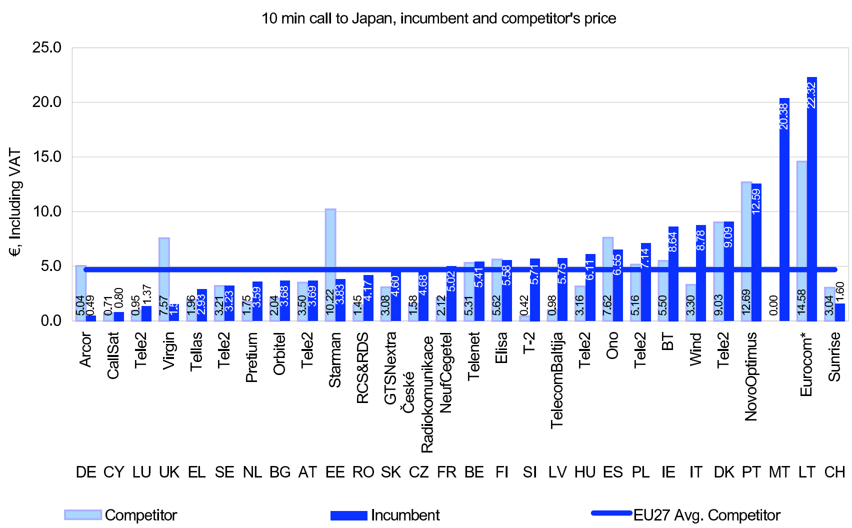
Sources for Switzerland: Telecom operators

Figure 84



Sources for Switzerland: Telecom operators

Figure 85



Sources for Switzerland: Telecom operators

2.6 Call termination on incumbent's fixed network

This section analyses the interconnection charges for call termination on the incumbent's fixed network. The figures show the charges per minute based on the first three minutes of a call at peak-time, VAT excluded.

The figures may have been approved by the NRA or simply agreed between operators, where the legal framework does not require NRA approval.

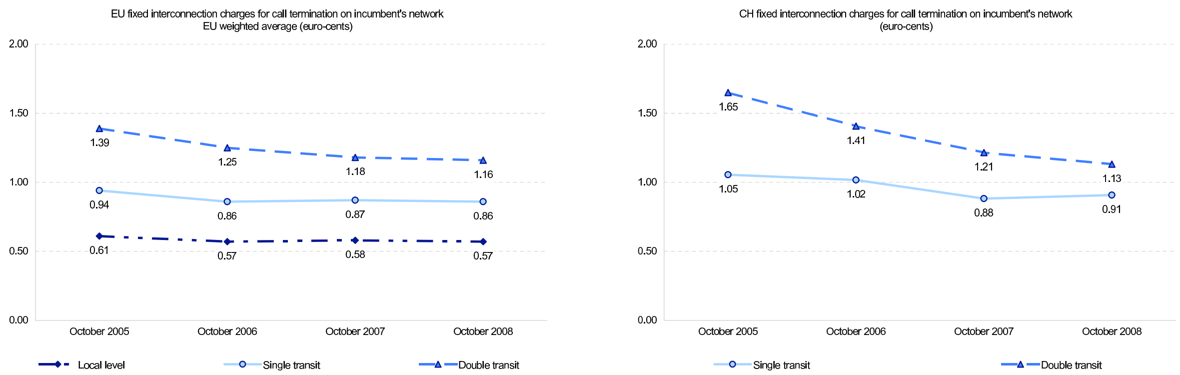
The following chart shows the EU weighted average for the interconnection charges since 2005 for local level, single and double transit. When comparing the categories of fixed interconnection fees, double transit represent in 2008 about twice the price of local level. Looking at the evolution of the interconnection charges on a per¬country basis the following comments can be made:

- TThe lowest local level interconnection fee is to be found in the United Kingdom (0.20 €-cent), and Cyprus (0.31€-cent). Finland has the highest interconnection fee for local and single transit at 2.12 €-cent. Lithuania has the second highest fee for local transit, 1.56 €-cent.
- The United Kingdom and Sweden have the lowest single transit interconnection fees, respectively at 0.30 €¬cent and 0.50 €-cents.

Figure 86 shows the price evolution (2005-2008) for the EU 86(a) and for Switzerland 86(b). During the period in question, interconnection charges for double transit fell in the Union as well as in Switzerland. In October 2008 the Swiss price was lower than the EU average for the first time. As far as single transit charges are concerned, the differences are less pronounced, but the Swiss charges are still above the EU average and began to increase in 2008.

Compared to the European average, double transit is 2.7% cheaper and single transit charges are 5.8% more expensive in Switzerland. It should be mentioned once again that in Switzerland there are no local termination charges. This means that an operator wishing to terminate a call in a third-party network must pay a minimum of a regional interconnection charge.

Figure 86

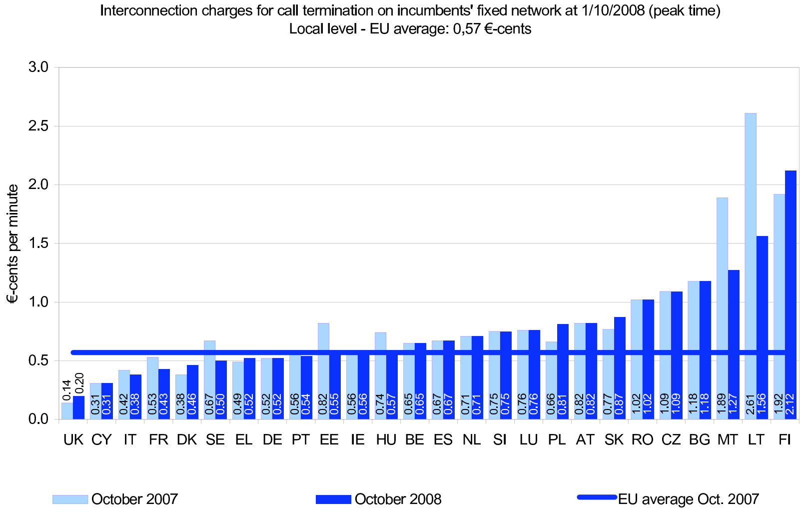


(a) (b)

Source for Switzerland: OFCOM Switzerland. Note: In Switzerland, single transit relates to regional call termination and double transit refers to national call termination. Local transit is not offered in Switzerland and is therefore not considered

The following three charts show the interconnection charges for the local level, single and double transit as of October 2006 and 2007. It should be noted that there are no local interconnection charges in Switzerland.

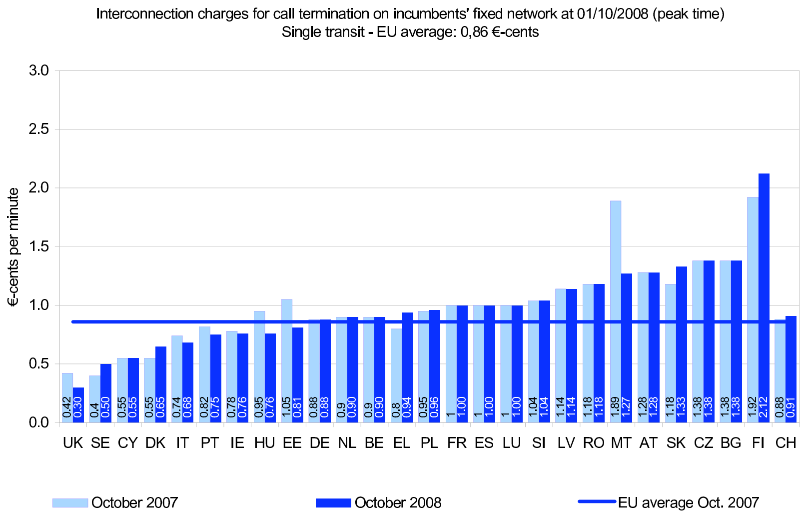
Figure 87



Malta: Due to size of country Malta has one geographical rate for local, single transit and double transit.
Romania: Starting with 1st September 2008, the maximum average weighted tariffs RTC is obliged to charge are: 0.84 eurocents for local, 0.97 eurocents for single transit and 1.06 eurocents for double transit.
Source for Switzerland: Local transit is not offered in Switzerland and is therefore not considered

Figure 88 illustrates the interconnection charges for single transit. In 2008 the price rose again whereas previously it had been falling. Swisscom's charges lie in the middle of the table, with 12 countries cheaper and 14 more expensive.

Figure 88

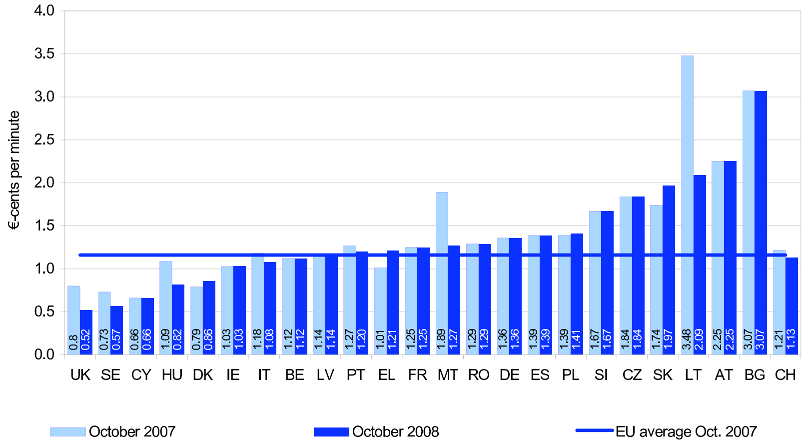


Malta: Due to size of country Malta has one geographical rate for local, single transit and double transit.
Romania: Starting with 1st September 2008, the maximum average weighted tariffs RTC is obliged to charge are: 0.84 eurocents for local, 0.97 eurocents for single transit and 1.06 eurocents for double transit.
Sources for Switzerland: OFCOM Swirtzerland

Figure 89 shows that the double transit charge in Switzerland (1.13 Euro cents) corresponds exactly to the weighted EU average. In previous years, Swisscom's charge for this service had been higher. Now, after years of falling prices this gap has been closed.

Figure 89

Interconnection charges for call termination on incumbents' fixed network at 1/10/2008 (peak time)
Double transit - EU average: 1,16 €-cents

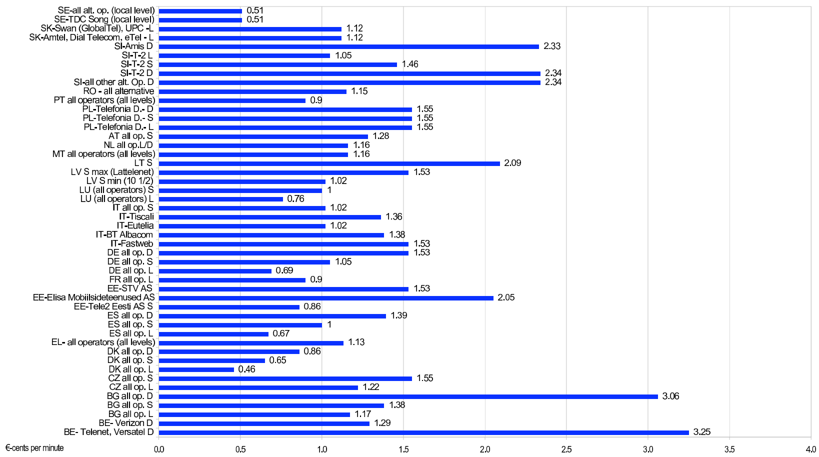


Czech Republic: double transit is not regulated being a subject of bilateral agreements.
Malta: Due to size of country Malta has one geographical rate for local, single transit and double transit
Romania: Starting with 1st September 2008, the maximum average weighted tariffs RTC is obliged to charge are: 0.84 eurocents for local, 0.97 eurocents for single transit and 1.06 eurocents for double transit
Sources for Switzerland: OFCOM Switzerland

2.7 Call termination on alternative operators fixed network

Figure 90

I.C. charges for call termination on main alternative operators fixed networks (peak) in €-cents, October 2008



Legend: L: Local, S: Single transit, D: Double transit
Cyprus, Hungary, Romania, Slovenia, Finland, United Kingdom: Data not available
France: Data not available
Ireland: No transit data available
Switzerland: data not available

Chapter 3

Broadband access and pricing

3.1 Broadband access definitions

This section provides data on the number and type of broadband lines supplied by both incumbent operators and new entrants/alternative operators in the EU. It also contains information on access lines provided by means of alternative technologies such as wireless access (WLL), fibre and cable modems. Data on mobile broadband access is also available, however data is not of the same quality for all countries. Data on speeds is partially available.

Information has been provided by the national regulatory authorities through the COCOM questionnaires on data for local broadband access. Given the rapid developments in this sector, it has been agreed with NRAs to update the questionnaires on a regular basis in January and July. Unless otherwise stated, the data below refer to the market situation at 1 January 2009.

The definitions used in the charts and data below are as follows:

- Fully unbundled lines: Fully unbundled lines supplied to other operators, excluding experimental lines. In the case of full unbundling, a copper pair is rented to a third party for its exclusive use. As fully unbundled lines (LLU) supplied by the incumbent operator to the new entrants could in principle be used for services other than broadband, the total number of LLU for access to internet will be lower than the total number of LLU.
- Shared access lines supplied by the incumbent to new entrants: Shared access lines supplied to other operators, excluding experimental lines. In the case of shared access, the incumbent continues to provide telephony service, while the new entrant delivers high-speed data services over that same local loop.
- Bitstream access: Supplied to new entrants. Bitstream access refers to the situation where the incumbent installs a high-speed access link to the customer premises and then makes this access link available to third parties, to enable them to provide high-speed services to customers. Bitstream depends in part on the PSTN and may include other networks such as the ATM network. Bitstream access is a wholesale product that consists of the provision of transmission capacity in such a way as to allow new entrants to offer their own, value-added services to their clients. The incumbent may also provide transmission services to its competitor, to carry traffic to a 'higher' level in the network hierarchy where new entrants may already have a broadband point of presence.
- Simple resale: In contrast to bitstream access, simple resale occurs where the new entrant receives and sells on to end users - with no possibility of value added features to the DSL part of the service - a product that is commercially similar to the DSL product provided by the incumbent to its own retail customers, irrespective of the ISP service that may be packaged with it. Resale offers are not a substitute for bitstream access because they do not allow new entrants to differentiate their services from those of the incumbent (i.e. where the new entrant simply resells the end-to-end service provided to him by the incumbent on a wholesale basis).

- Incumbent's DSL lines: Provided to end users by the incumbent, its subsidiaries or partners (for example an associated company such as a joint venture providing ISP services).
- WLL: Internet broadband connections by means of wireless local loop (sometimes referred to as fixed wireless access).
- Cable modem: Internet broadband connections by means of cable TV access.
- L.L. or Other traditional wireline access: Internet broadband connections by means of dedicated capacity (Leased Lines) provided over metallic copper pairs, including tail ends or partial circuits. "Incumbent's leased lines" includes only retail lines and excludes lines provided to other operators. "New entrants' leased lines" includes all retail lines provided to end users, even if based on wholesale lines supplied by the incumbent.
- Fibre to the home: Internet broadband connections by means of fibre optic.
- Satellite: Internet broadband connections via satellites.
- Powerline communications: Internet broadband transmitted over utility power lines.
- Other categories: Internet broadband connections by means of local area networks, other.
- Retail access: Access provided to end users.
- Incumbents are defined as the organisations enjoying special and exclusive rights or *de facto* monopoly for provision of voice telephony services before liberalisation, regardless of the role played in the provision of access by means of technologies alternative to the PSTN.
- "New entrants" refers to alternative telecommunications operators, as well as internet service providers (ISPs).
- Broadband capacity: Capacity equal to, or higher than, 144 Kbit/s.

3.2 Wholesale access

This section shows the availability of fixed wholesale access lines supplied by incumbent operators to new entrants. Separate figures are provided for fully unbundled lines, shared access, bitstream access and resale.

Figure 91

Availability of wholesale access, January 2009

Country	Incumbent's PSTN activated main lines	Fully unbundled lines supplied by the incumbent to new entrants			Shared access lines supplied by the incumbent to new entrants			Wholesale DSL lines supplied			
		Unbundled lines	Requested lines	N. of agreements	Shared lines	Requested lines	N. of agreements	Bitstream access		Simple resale	
								No. of lines	No. of agreements	No. of lines	No. of agreements
BE	4010973	61748		8	34570		7	287515	10	15450	14
BG	2132669				2	10	3	161	8	8212	1
CZ	confidential	confidential		confidential	confidential		confidential	confidential	confidential		
DK	2362060	244631		25	57244		8	123721	24	31326	15
DE	36947000	8270000		120	116000		19	800000e	6	1700000e	22
EE	414000	7674	720	7				83	1		
IE	1709520	17284	111	7	5369	91	7	182384	15		
EL	5253695	589234	24567	19	56890	558	7	94413			
ES	15751140	835831		16	862418		11	345226	26	82752	2
FR	8325505	4938531			1392973			2102515		93984	
IT	17274050	4732428	50024	32	586308	1045	14	1380000	172		
CY	408784			3	327		3	197	2		
LV	600000	471		2	11		2	648	10	556	
LT	703372e	473e		2e				2282e	10e		
LU	220864	12788	382	4	33	0	4	0		14132	6
HU	2795000	13022	95	8	5881	44	8	204320	22		
MT	187588							8351	11		
NL	5215000	459000		9e	194000		9e	confidential	5e		
AT	2540000e	293909	1995	36	127		3	60408e			
PL	8016805	1544	987	13	88		13	347474	18		
PT	2777387	305244	2797	4				49820	11	1435	6
RO	3000000	1546		17	414		17				
SI	764094	50023	700	3	23322	185	3	18546	4		
SK	966148							24935	19		
FI	2050000	347600			56200			58800			
SE	4644000	407524			192164			1000e		85000e	
UK	20766294e	1596280		63	3906327		39	704050	36	7369538	489
CH	3623000	31000	n.a.	8	0	0	0	0	0	431000	32

Data for the Netherlands as at October 2008. e – estimated figures.
DE: Data on incumbent's activated main lines – including incumbent's active analogue and ISDN access lines, FULL and SA. Excluding bitstream, DSL resale, public payphones and self-supply.
ES: Provisional figures.
FR: Provisional figures of 25 January 2009.
LT: Incumbent's FULL lines are used on the retail level by new entrants for the provision of other data transmission services (eg. VPN) and 10 lines are used for provision of broadband internet access services.
HU: There are three incumbent operators.
AT: Where estimates are used, data is based on extrapolation of data as at 31 October 2008.
RO: A total of nine agreements concluded both for full and shared access.
FI: There are more incumbent operators.
SE: Incumbent's activated main lines – total number of active PSTN and ISDN subscriptions.
Source for Switzerland: OFCOM Switzerland, Telecom operators, www.providerliste.ch

Following the revision of the Telecommunications Act which entered into force on 1 April 2007, the dominant operator is now obliged to provide several types of access service, including fully unbundled access to the local loop for an undefined period and high-speed bitstream access for a period limited to four years. On the other hand, shared access to the local loop is not provided for in the Act.

Though the first steps towards unbundling of the local loop in Switzerland have been modest, they are quite encouraging. In fact, in January 2009, Swisscom had signed eight contracts with alternative operators (i.e one less than in January 2008), an entirely satisfactory figure in comparison with other countries, as it puts Switzerland on the same footing as Belgium and Hungary. At the same period, 31,000 access lines were effectively unbundled, 29,300 more lines than in January 2008. This fast growth is the result of the development of local exchange co-location equipment and also the consequence of the investments made by the new entrants. If the number of lines in Switzerland seems quite small compared with similar countries such as Belgium (61,748), Denmark (244,631) or Austria (293,909), it is however much greater than those of Ireland (17,284), Hungary (13,022) and Poland (1,544).

However, the situation is different with regard to high-speed access. In fact, since Swisscom considered that it did not occupy a dominant position in the wholesale high-speed market, it refused to provide a basic offer for this type of access. Following a study by the Competition Commission which concluded that Swisscom was dominant in the market in question, on 22 November 2007 the Communications Commission (ComCom) obliged the historic operator to offer high-speed access to other telecommunications service providers at cost-based prices. Swisscom lodged an appeal against this decision with the Federal Administrative Court. The final decision of the Federal Administrative Court fell in February 2009, confirming the dominant position of Swisscom in that specific market segment. As a result, Swisscom is now subject to the obligation to provide a cost oriented bitstream access offer to the new entrants.

The “resale” category includes a high-speed connection service freely marketed by Swisscom for several years in the wholesale market at prices which the company itself defines. In December 2008, there were 431,000 units under this heading, i.e. 6000 less than in the previous year. In comparison with other countries, reselling plays an important role in Switzerland. This situation is explained by the fact that since the alternative operators do not want to construct an access network, they were forced to use this sole solution in order to be able to market high-speed services.

3.3 Retail fixed broadband access

This section provides information on the deployment of fixed broadband access lines by incumbents (and their subsidiaries or partners) and by new entrants (alternative telecom operators or Internet Service Providers) to end-users.

Fixed broadband access can be provided by different means: DSL lines, cable modem, wireless local loop (WLL), fibre, dedicated leased lines and other access (such as satellite, powerline communications, local area networks, etc.).

New entrants’ DSL lines can be provided to end users by means of fully unbundled or shared access lines, bitstream access or resale. In some Member States, new entrants have started rolling out parallel DSL networks.

In all the charts below on fixed broadband retail lines the data refer to 1 January 2008 and 1 January 2009. In some cases only estimates are available or data is from 1 October 2008.

The following figure shows the total number of fixed broadband access lines for each Member State, provided by both incumbents and new entrants/alternative operators, and including all types of fixed broadband connections.

Figure 92

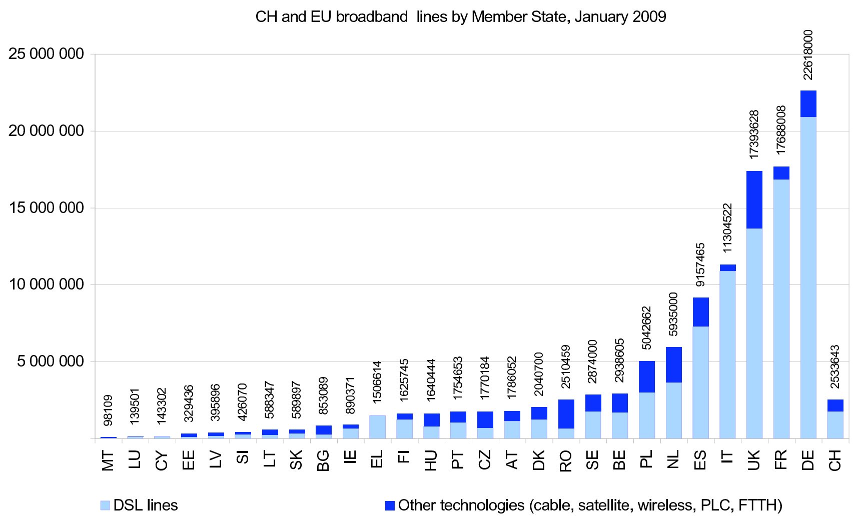
Availabilty of incumbent's and new entrants retail broadband access to the internet

		New entrants' DSL lines on PSTN					Incumbents' access lines by other means								New entrants' access lines by other means								
	Incumbent's DSL lines	Own network	Full ULL	Shared access	Bitstream access	Resale	WLL	Cable modem	Other trad. wireline access	FTTH	Sat	PLC	Other	Public Hotspots	WLL	Cable modem	Other trad. wireline access	FTTH	Sat	PLC	Other	Public Hotspots	Total number of new entrants
BE	1343260		47872	17194	204387	98360			5433						20040	1200198	1145	716					
BG	247751				132	8212			596				14		5078	103048e	683	14413	7	473155e			656
CZ	592539	500	39848	10227	54558										620000	382512		70000					
DK	827820		236149	66852	75794	33538		306522	17762				16760		24284	232414	3919	87991	5		110890		59
DE	10594000	12000e	7700000	116000	800000e	1700000e			28000		7000			8000		1600000	27000e		24000	10000			100
EE	129387	1608	5186		83	40	5617			39173			534	170	7712	74573	21821	28673			15029	1040	87
IE	454989		17284	5369	182384		321		4012		147			1055	114012	96678	4988	6277	2730		1180	310	43
EL	864021		485030	56890	94413						386				1001		2857	2016					22
ES	5156701		835831	862418	345226	82752				23611	10114				55359	1775842	5467	2590	1058		496		18
FR	8325505		4938531	1392973	2102515	93984				14500e						800000e	20000e						
IT	6754000	763	2563439	202000	1380000	2790			268	506	7294		424	4844	3200		5400	308133	74009		2296		181
CY	115629		23537	327	197				124e		21			66	20e	3313e	37e		97				
LV	183164		268	8	45	556	102			152			378		14383	37217	8275	7446	329	16	143557		236
LT	252000e		10e		2282e		21400e		70e	21950e				4000e	37418e	66078e	2040e	135207e	201e		49691e	293e	112e
LU	97326	21	10170	0		14132		701	409	263				41	140	16259e	10	70	0	0		90	
HU	583454		13022	5881	204320		2000e	96893	900e						85000e	645464e	1800e	1000e	710				516e
MT	37599				8351										2882	49277						33	16
NL	confidential		459000	194000	confidential											2192000		100000e					
AT	810000e		274417	127	60408e										35000e	595000e		4800e		5300e	1000e		
PL	2423804	246259	1544	88	339395			112291					1691		20532	1287598	2285	3120			604055	309	3600e
PT	711460		296337		49620	1435			721	419	19			1460	21647	668815	2173	2006	1				33
RO	654000	742	1129						782	673					27400	465400	13	88500	420		1271400	948	1103
SI	193962		50023	23322	18546		48			15426				66	209	95076	266	29138	6		48	649	51
SK	304951				24935	0			549	1436					82000e	62000e	49000e	65000e	26			500	296
FI	807300		347400	26800	58800		17600	108500					119800		6600	106200				1245	25500		55
SE	1057000e		192000	408000	1000e	115000e			6000e	73000e					2000e	556000e	4000e	460000e					130e
UK	4420472	93433	1596280	3906327	704050	2949066									30000e	3688000e			6000e				
CH	1325000		31000			431000										730000							150e

Data for the Netherlands as at October 2008.
e - estimated figures. ES: Provisional figures.
HU: There are three incumbent operators.
AT: Where estimates are used, data is based on extrapolation of data as at 31 October 2008.
RO: Provisional figures.
SK: The Commission services believe that all bitstream lines should be reported as resale. Other traditional wireline access column contains data for both leased lines and Ethernet connections.
FI: There are more incumbent operators.
SE: FTTH columns include both FTTH lines and fibre-LAN connections.
Sources for Switzerland: OFCOM Switzerland, Telecom operators

In January 2009, Switzerland had 2,533,643 broadband lines (active customers). Note that 1,756,000 customers were connected using DSL technology and 777,643 by other technologies (mainly cable modem). In absolute terms, the Swiss market is relatively small in size, especially compared to countries such as Italy, France, the United Kingdom or Germany with over 10 million high-speed lines each.

Figure 93

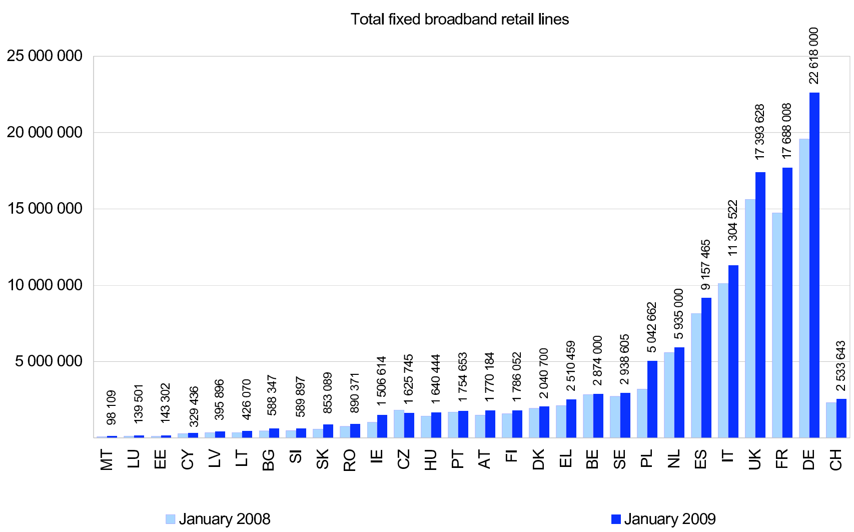


Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland estimations. Note: Leased line services are not included

The following chart presents the number of broadband lines per Member State on 1 January 2008 and 1 January 2009.

Figure 94 clearly shows that the number of high-speed lines increased from 2,312,000 in January 2008 to 2,533,643 in January 2009, representing a 9.6% increase. All the European Union member countries exhibit a positive trend, though to very different extents.

Figure 94



Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland estimations. Note: Leased line services are not included

The following two charts show the breakdown of broadband lines according to the two main groups of types of technologies.

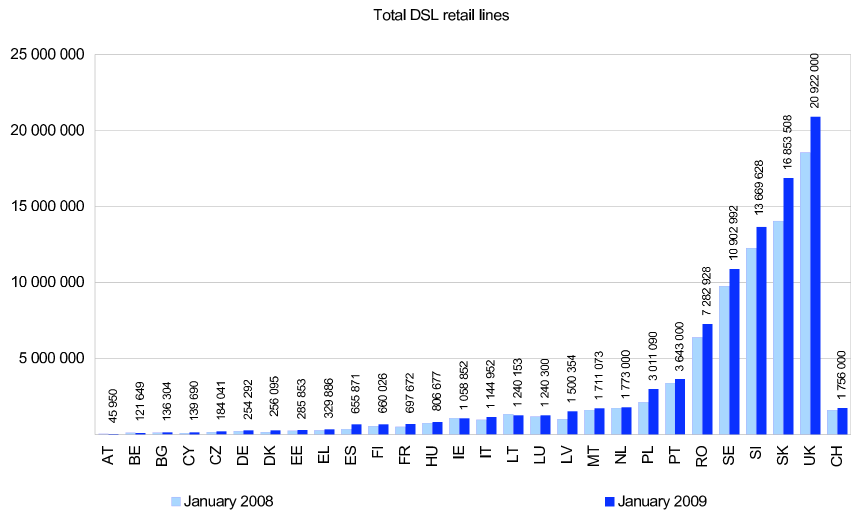
Figure 95 shows the number of DSL lines. Amongst the technologies other than DSL (Figure 96), cable modem is the most common technology. Other technologies are still marginal, though some (fibre to the home and WLL) are quickly developing.

Figures 95 and 96 show that growth in broadband connections in Switzerland was as follows:

- + 9.6% for DSL broadband connections (Figure 95);
- + 9.5% for alternative broadband connections – mainly cable modem (Figure 96). Cable modem connections grew by 2.8% only.

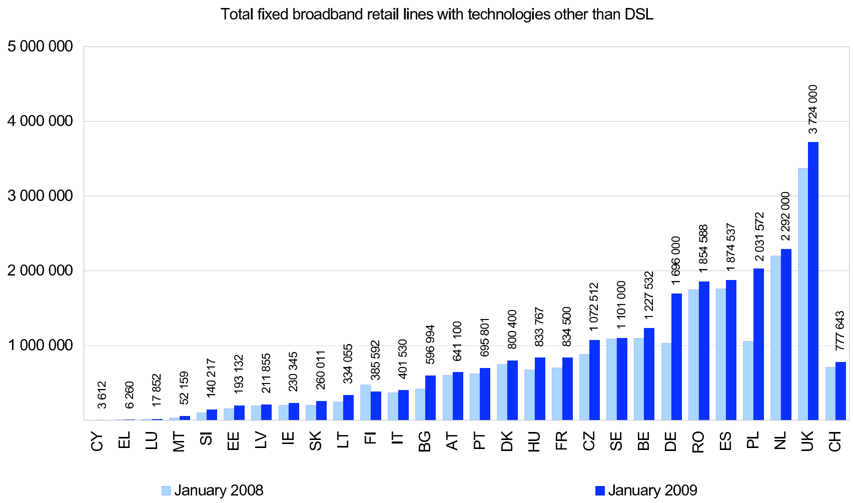
For several years now, DSL connections have been enjoying greater success than cable modem connections. Consequently, DSL technology continues to gain ground.

Figure 95



Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators

Figure 96

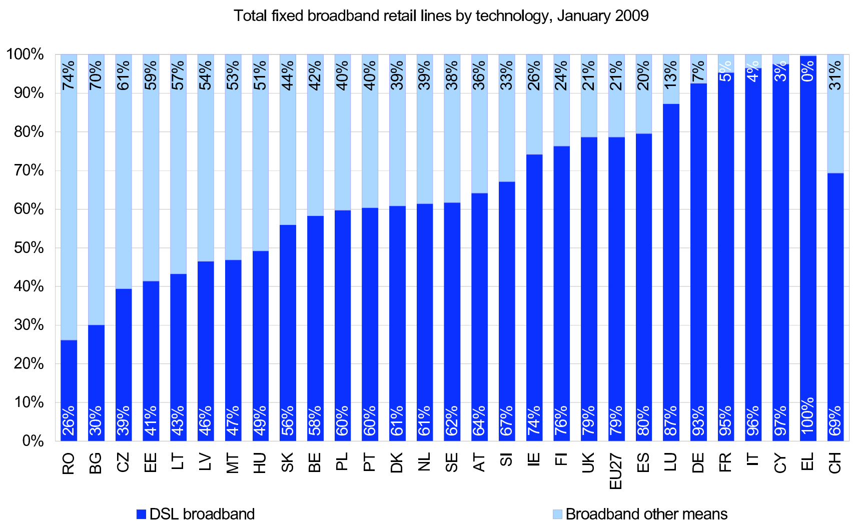


Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland estimations. Note: Leased line services are not included

The following charts provide information on the national broadband markets according to the technology used and the type of operator. The figure shows that DSL is the predominant technology in the EU. On average, 79.4% of the EU broadband lines use DSL technologies, while in eight countries DSL lines represent less than 50% of the overall market.

With a market share of 69.3%, the dominant broadband access technology in Switzerland is DSL. From a relatively equal split between cable modem and DSL in July 2003, growth in the broadband market has seen a constant change in the market share, with growth rates and customer base lower for cable modem. Broader coverage and advertising campaigns launched by the many resellers of the Swisscom wholesale product largely explain this trend.

Figure 97



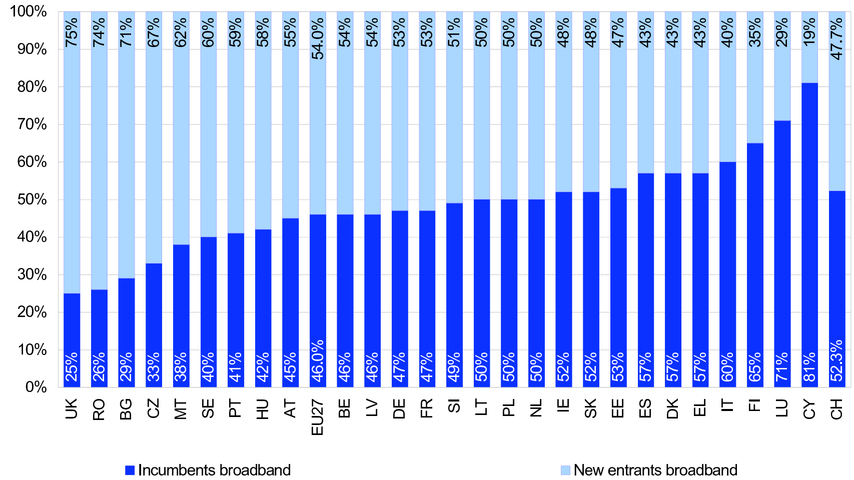
Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland estimations. Note: Leased line services are not included

With regard to the market share of fixed incumbent operators and new entrants, the following chart indicates that, on average, incumbent operators control 45.6% of broadband lines, which is 0.4 point less than in January 2008.

The historic operator’s subsidiary has 52.3% of the market for high-speed lines on fixed networks, putting Switzerland 6 points above the European average (46.0%). Contrary to what has been observed in the Union countries, the historic operator’s subsidiary has managed to win back some ground since October 2006, when this rate was 45%.

Figure 98

Fixed broadband access lines by operator, January 2009

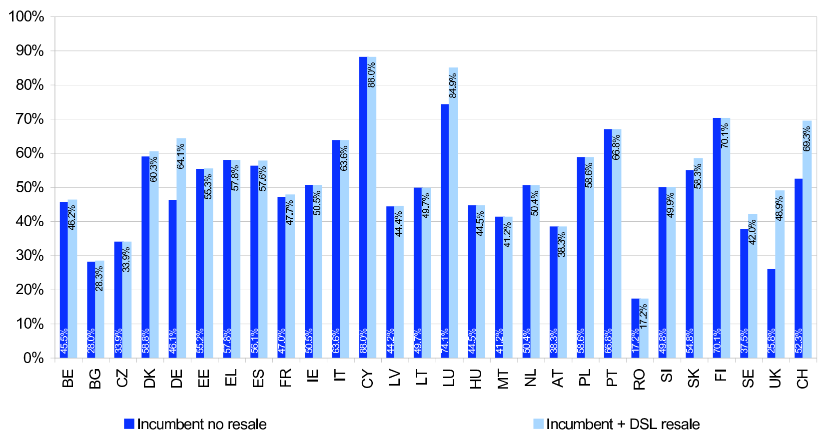


Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland estimations. Note: Leased line services are not included

However, differences in the incumbents’ market share depending on whether DSL resale lines are included or not are negligible. In Germany, Luxemburg, United Kingdom and Switzerland these differences are more than 10 percentage points, and up to 23 points (UK).

Figure 99

Incumbent's broadband market share excluding/including resale lines by alternative operators (January 2009)



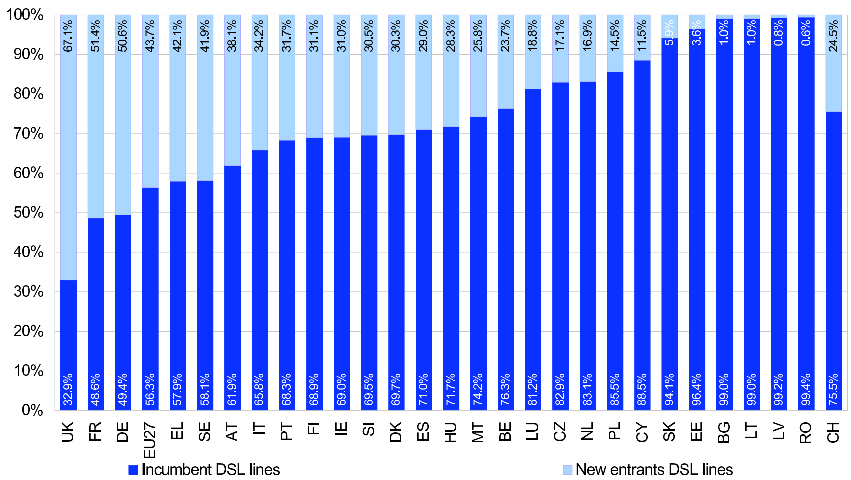
Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators

Next chart presents the market share by operator in the DSL retail market. At EU level the fixed incumbent operators provide 56.3% of DSL lines. In 12 Member States the incumbent operators sell more than 80% of all DSL retail lines.

In January 2009, the retail subsidiary of the historic operator in Switzerland had a market share of 75.5%, the other 24.5% of the connections were held by competing operators. In the international comparison, as a result of the constant growth of the incumbent's market share (59% in July 2004, 64% in October 2005, 68% in October 2006 and 72.7% in October 2007), Switzerland has lost its balanced position in terms of market share.

Figure 100

DSL access lines by operator (January 2009)

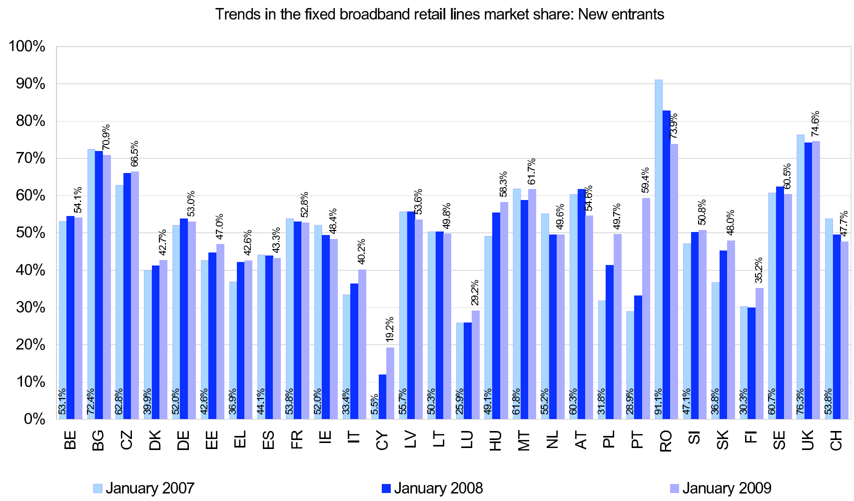


Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators

The next series of charts provide further information on the trends observed in the three segments analysed previously. As can be seen in the following figure, new entrants are steadily increasing their presence in the overall fixed broadband market, with an average 54.4% market share against 54.0% a year ago. This trend is however not uniform, and in ten countries the fixed incumbent operator has increased its market share.

In Switzerland, this situation is explained by the substantial growth in absolute terms of the number of broadband DSL connections (greater than the growth in cable modems). More than half of the connections are held by the subsidiary of the historic operator.

Figure 101

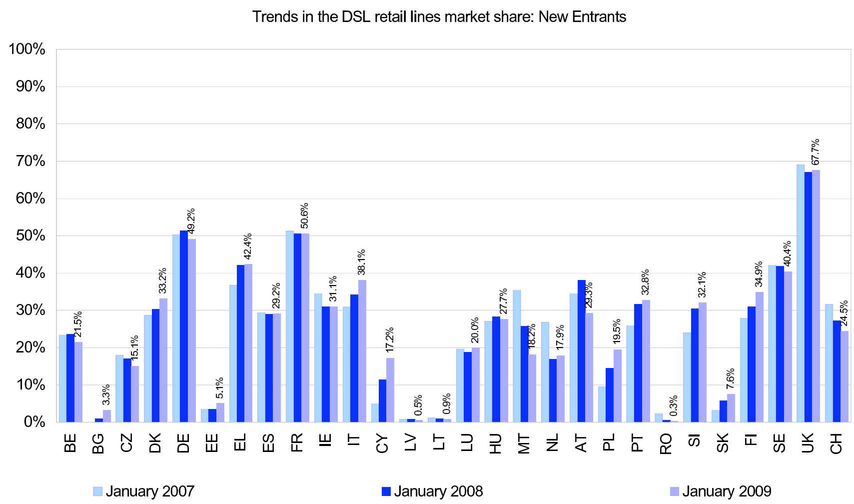


Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland estimations. Note: Leased line services are not included

With regard to the trend in the number of DSL lines sold by incumbent operators in the same period, an increase of 0.1 percentage points in the period January 2008–January 2009 has been registered on average.

Between the two observed periods, the subsidiary of the Swiss historic operator gained 2.8 points of market share in the DSL access segment (4.3 between 2007 and 2008). This upward trend puts it in the minority of the European Union countries in which the historic operator or its subsidiary has managed to reverse the trend and consolidate its situation.

Figure 102

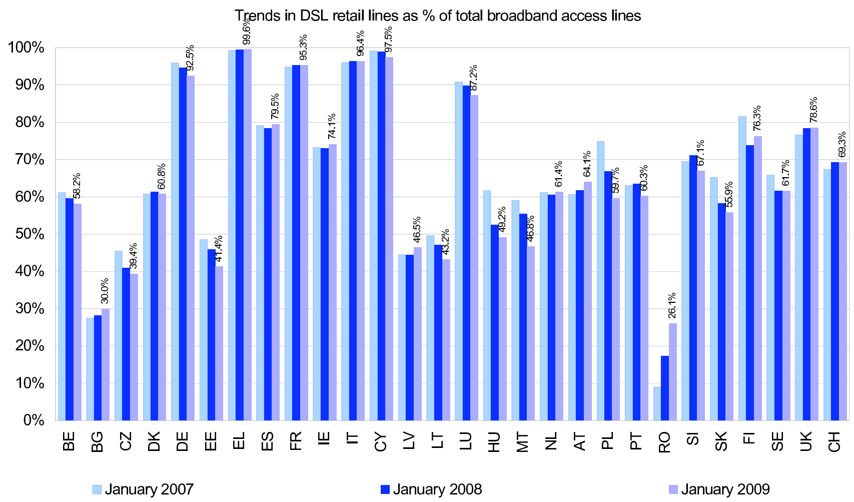


Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators

The number of DSL lines has decreased in the overall fixed broadband retail market, representing 79.4% of all broadband lines against 80.3% in January 2008. However, in 10 countries, the share of DSL has increased.

In Switzerland too, one can observe a slight increase in the proportion of the number of DSL connections compared with the total number of activated broadband connections. This is not surprising since in Switzerland the growth enjoyed by DSL in absolute terms is higher than that of cable modems. In the observed period the DSL market share stabilized to 69.3%, though Switzerland is still 10.1 points below the European average (79.4%).

Figure 103

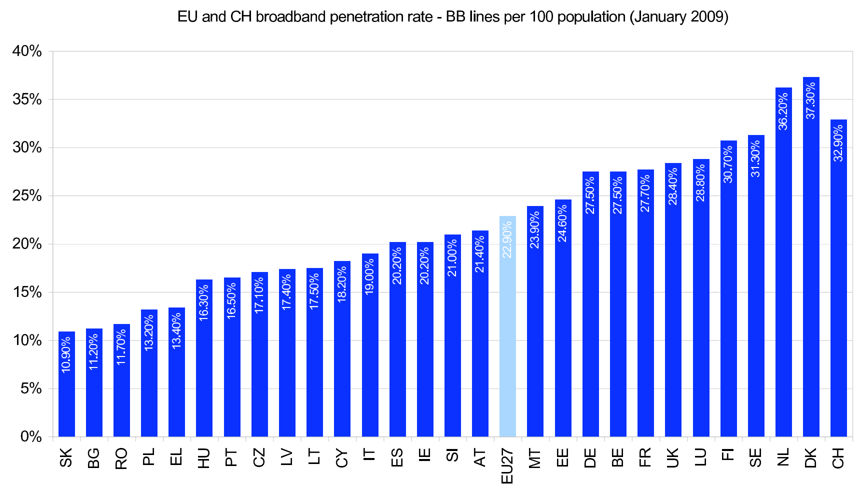


Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland estimations. Note: Leased line services are not included

The following chart shows the penetration rate for fixed broadband lines measured as the total number of broadband lines divided by the total population. The broadband penetration rate varies significantly across Member States ranging from 10.9% in Slovakia to 37.3% in Denmark.

In January 2009, the broadband access penetration rate in Switzerland was one of the highest in Europe (32.9%). Only the Netherlands and Denmark had higher rates.

Figure 104



Data for the Netherlands as at October 2008.
Sources for Switzerland: Telecom operators, OFCOM Switzerland estimations. Note: Leased line services are not included

3.4 Retail broadband lines by speeds

Since no data are available for Switzerland, this section is not presented in this report. For more information, see the 14th Implementation Report (March 2009))

3.5 Retail mobile broadband access

The only data available in Swiss official Telecom statistics is the number of clients that used the UMTS net in 2007 (the identification is made through the IMEI code). Therefore this section is not presented in this report. For more information, see the 14th Implementation Report (March 2009))

3.6 Price for unbundled local loop

This section illustrates the cost of connection and monthly rental for both full unbundled access (full LLU) and shared access (SA) to the loop. Monthly rental and connection fees are presented as well as the total average monthly cost (over three years).

Unless otherwise stated connection fees include the technical expertise to assess the speed that can be conveyed through and disconnection fees (where applicable). Furthermore, only the price for a single line is presented here (charges may be different in the case of subsequent access). It is assumed that the loop is active and it will be used to provide both telephony and DSL services. Unless otherwise stated figures exlcude a whole range of additional one-off costs that may exist in some Member States like, cost of co-location, cost for the cable termination point, cost for installation at the end-user premises, etc.

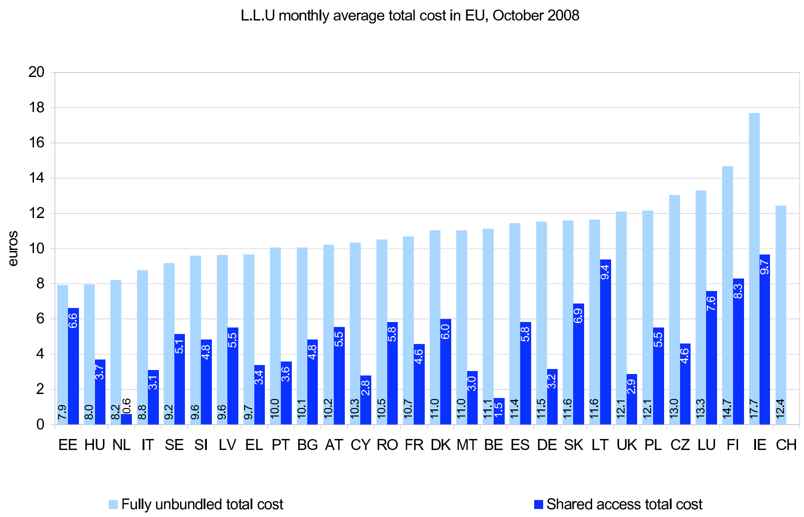
Data is not always comparable with that of the previous reports, due to changes in methodology occured in some countries.

3.6.1 Monthly average total cost

The following charts illustrate the monthly total cost for the full LLU and shared access (connection and monthly fees) based on the assumption that the loop is used for three years. EU average since 2005 is also shown.

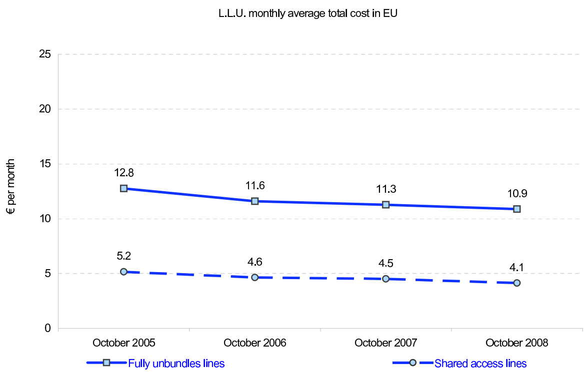
In October 2008, the average monthly cost of an unbundled line was 12.4 Euros, placing Switzerland above the European average (10.9 Euros). Since unbundling of the local loop only entered into force on 1 April of the same year, it is impossible to measure developments over the past three years. However, as has happened in the European Union countries, there is strong pressure on the cost of unbundling, which has already resulted in a considerable reduction to which Swisscom agreed of its own accord in March 2008. Moreover, several operators have requested the Communications Commission (ComCom) to take a decision on the prices charged for unbundling. In September 2008, ComCom set the price for unbundling the local loop for the first time. ComCom reduced the monthly price for unbundling of a house connection to 12.4 Euros for the year 2008 and 11.5 Euros for 2007. Swisscom did not contest the decisions.

Figure 112

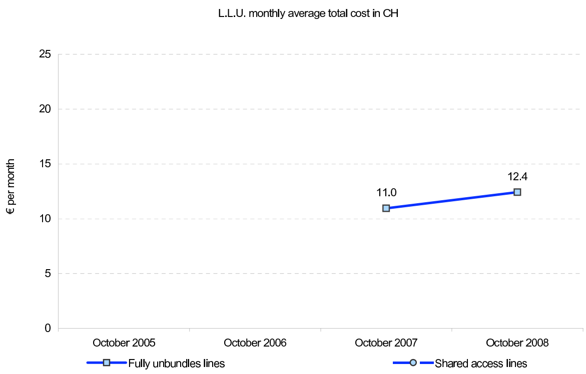


(a)

Spain: The cost of the test and disconnection fees is included in connection
Netherlands: 2008 data as of 1-7-2008
Sources for Switzerland: Telecom operators



(b)

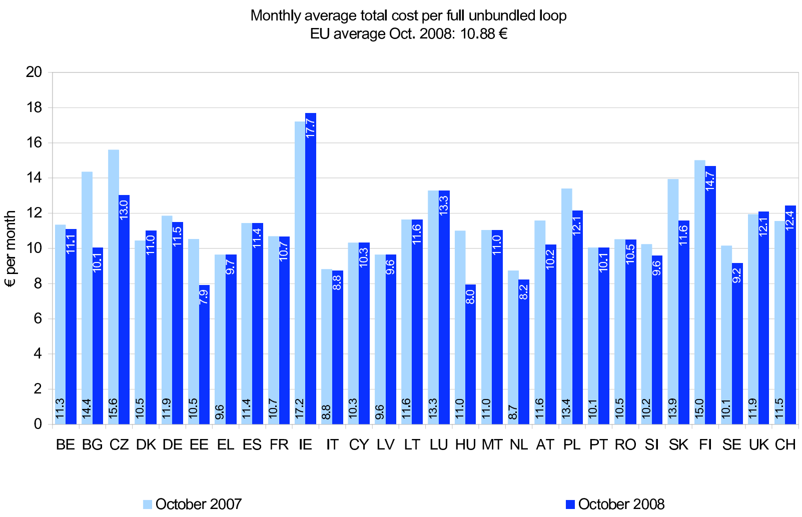


(c)

Figures 2005 entries do not include data for Bulgaria and Romania.
Sources for Switzerland: Telecom operators

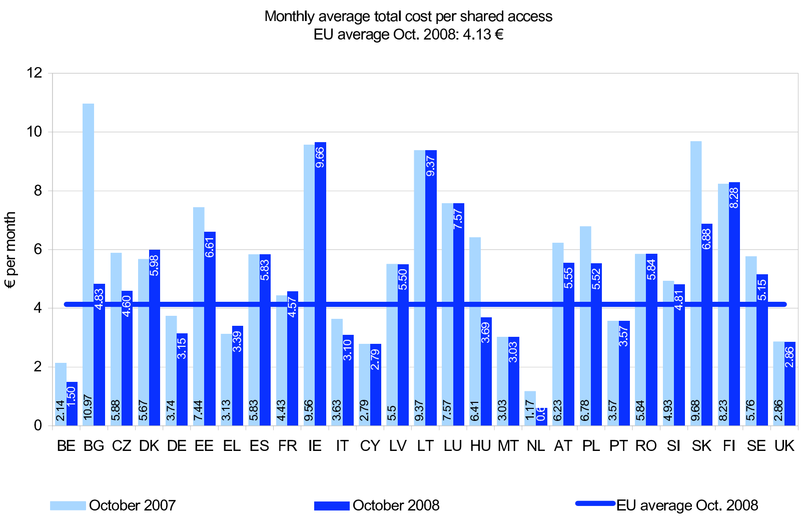
At an average cost of 12.4 Euros per month, Switzerland is still placed above the weighted European average, but the situation is considerably improved compared to the one prevailing a year ago (20.4 Euros, highest position of the benchmark). In the European Union countries, this cost varies between 7.9 Euros (Estonia) and 17.7 Euros (Ireland).

Figure 113



Spain: The cost of the test and disconnection fees is included in connection
Finland: weighted average of 31 SMP operators providing ULL
Sources for Switzerland: Telecom operators

Figure 114

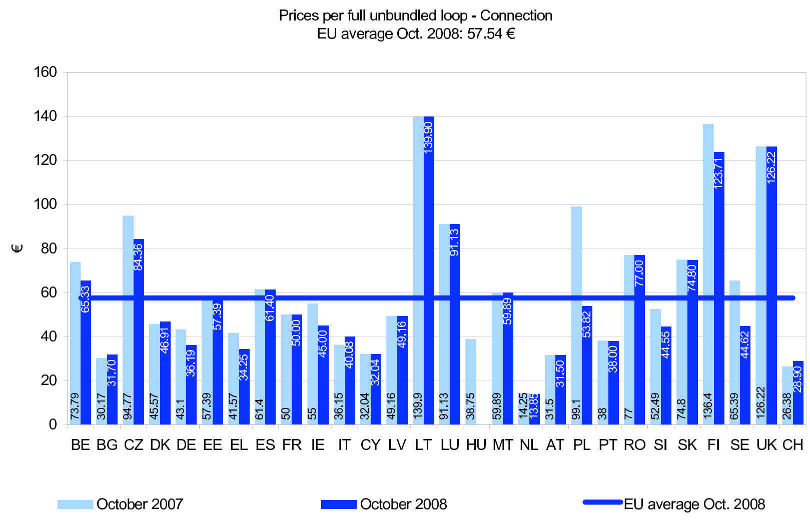


Spain: The cost of the test and disconnection fees is included in connection
Sources for Switzerland: Telecom operators

3.6.2 Connection and monthly rental for full unbundled local loop

The one-off price which alternative operators had to pay to Swisscom for transferring the line (an active line) was 28.9 Euros in October 2008. i.e. 28.6 Euros below the average in the European Union. Among Switzerland's neighbours, this price varied between 13.85 Euros (Netherlands) and 139.9 Euros (Latvia).

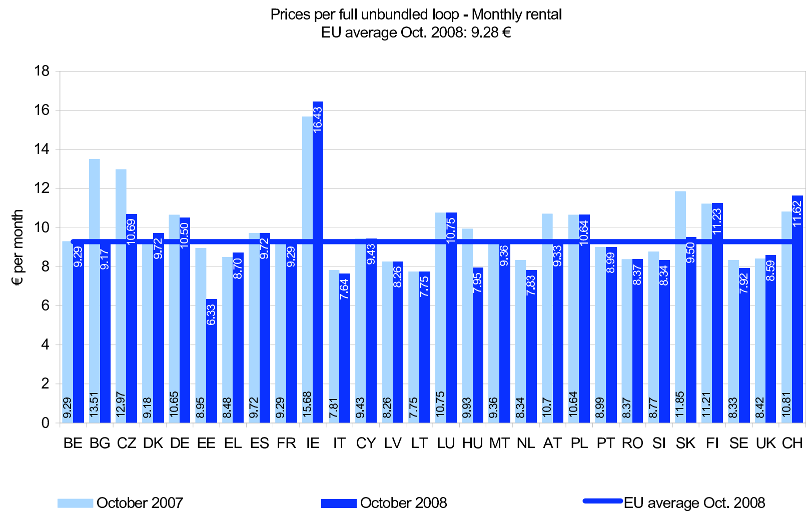
Figure 115



Spain: The cost of the test and disconnection fees is included in connection
Finland: weighted average of 31 SMP operators providing ULL
Sources for Switzerland: Telecom operators

In October 2008 the monthly price for leasing an unbundled line in Switzerland was 11.62 Euros, or nearly 25% above the European average. At that time the price in the European Union countries was between 6.33 Euros (Estonia) and 16.43 Euros (Ireland).

Figure 116



Finland: weighted average of 31 SMP operators providing ULL
Sources for Switzerland: Telecom operators

3.6.3 Connection fees and monthly rental for shared access

Since shared access is not regulated in Switzerland, this section is not presented in this report. For more information, see the 14th Implementation Report (March 2009))

Chapter 4

Converged services – bundled offers

In this section, for the first time some indicators are presented for bundled offers.

More and more of the fixed voice telephony offers come bundled with other services (for example, broadband Internet or television). Although bundling is hard to measure (sometimes services in one offer are invoiced separately, sometimes not), it is becoming a key element of the fixed electronic communications markets: according to the questionnaires sent by NRAs almost 13% of the European population is already subscribed to a bundled offer with a single bill.

Actually, in this case, 'Bundled offer' means a commercial offer of a single operator which includes two or more services such as fixed and mobile public telephony services, access to TV programmes and broadband internet access, offered for a single price and as part of one bill.

Although not every Member State is collecting data to measure the extent of this market development, the situation is likely to improve in the following Reports.

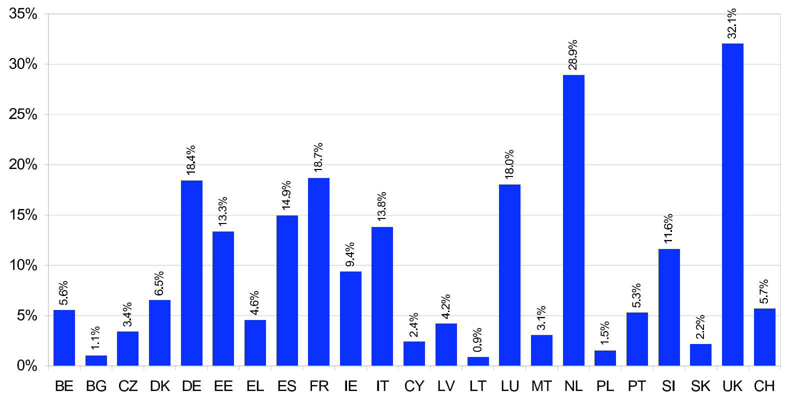
As this is the first year, data in this section is purely indicative and the data can be completed with the Eurobarometer E-Communications Household survey. The differences with this Implementation Report results can be attributed to a different definition (due to the billing of the services) and the lack of data for some countries.

According to this survey 71% of the Europeans do not have a bundled package. The charts presented in this section are the number of bundled offer subscribers as a percentage of the population and the number of operators providing these offerings.

In Switzerland, bundled offers as defined by the European Commission do not yet play an important role in the market. They are predominantly offered by operators with a local presence. As far as the major operators active throughout the national territory are concerned, they only offer double play but not yet any triple play bundles. Moreover they tend to give discounts to customers who combine two or more of the services they market separately. However, it is possible to assume that, by analogy with what is happening in the Union countries, bundled offers of services will become more common.

Figure 119

Bundled offers subscribers as % of population, 2008

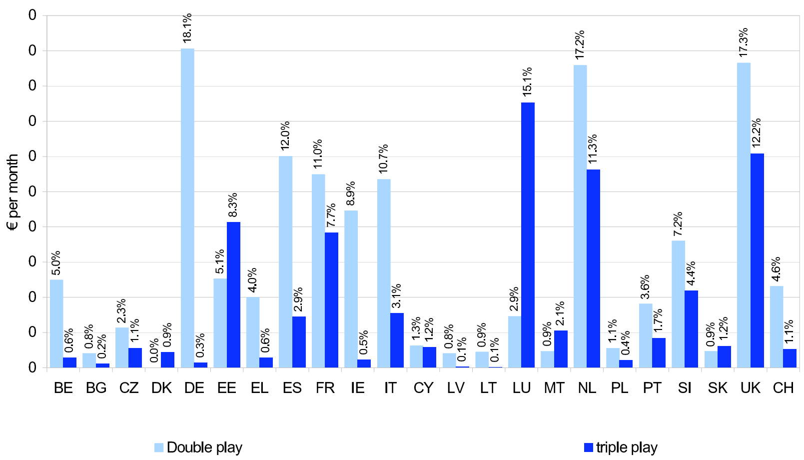


Data not available for Hungary, Austria, Romania, Finland and Sweden.
Ireland: Please note that these subscribers are not representative of 100% of bundled subscribers in the market.
Austria: data not available
Latvia: This is an estimate – at least 95631 users for bundled offers
Portugal: Data as of 31/12/ 2007
Romania: Data not available
Slovenia: Bundled services include two or more services provided under single subscription.
Sweden: Data not available
Source for Switzerland: OFCOM Switzerland

Double play offers in Switzerland are more common than triple play (4.6% and 1.1% of the population are subscribers, respectively). Compared with the EU data Switzerland performs moderately.

Figure 120

Bundled offer per type as % of population, 2008

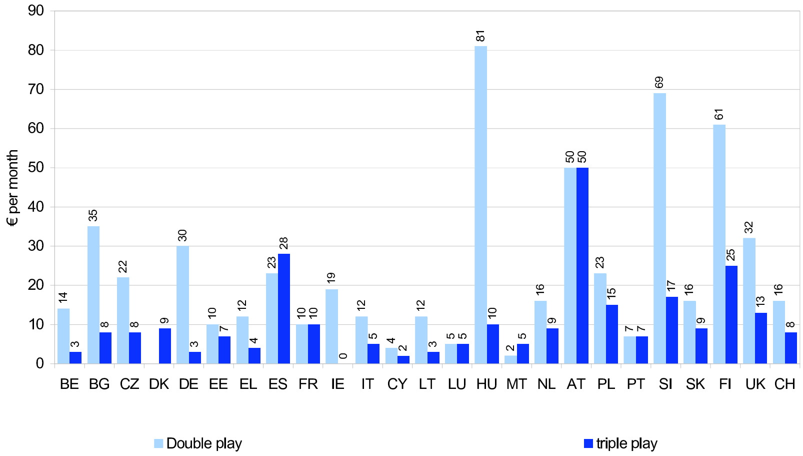


Data not available for Hungary, Austria, Romania, Finland and Sweden.
Belgium: Data as of 31/12/2007, resellers included
Bulgaria: Data of subscribers of Television and BB as of December, 31, 2007. Data of subscribers of Fixed voice telephony, BB and TV as of December, 31, 2007.
Denmark: Triple play comprises Internet, Telephony (either mobile or fixed) and TV so only the subtotal is reported. Total number of bundled offers (not specified and incl. Triple play)) = 357778
France: Data from the first quarter 2008. TV included in the bundled offer is TV over ADSL Fixed voice telephony means VoIP telephony
Ireland: Please note that these subscribers are not representative of 100% of bundled subscribers in the market. Luxembourg: Triple Play is mainly fixed services, broadband and mobile services.
Netherlands: OPTA measures 'customers with several services from one provider' for practical administrative reasons, a much broader definition.
Austria: data not available
Portugal: Data as of 31/12/ 2007 Romania: Data not available
Slovenia: Bundled services include two or more services provided under single subscription.
Source for Switzerland: OFCOM Switzerland

The number of operators that offer double / triple play is 16 and 8 respectively. As there are a lot of local operators and Switzerland is a small country, this performance would appear adequate.

Figure 121

Bundled offers operators, 2008



Data not available for Latvia, Romania and Sweden.
Belgium: Situation as of 31/12/2007
Bulgaria: Data of subscribers of Television and BB as of December, 31, 2007. Data of subscribers of Fixed voice telephony, BB and TV as of December, 31, 2007. Mobile/Broadband bundle offer and Mobile and fixed bundled offer data are confidential
Denmark: Triple play comprises Internet, Telephony (either mobile or fixed) and TV so only the subtotal is reported.
Austria: data not available
Portugal: Data as of 31/12/ 2007
Romania: Data not available
Slovenia: Bundled services include two or more services provided under single subscription.
Source for Switzerland: OFCOM Switzerland

Chapter 5

Exchange rates and population

5.1 Exchange rates used

For 2007 data:

	Euro
Belgium	1,00
Bulgaria	1,96
Czech Republic	27,77
Denmark	7,45
Germany	1,00
Estonia	15,65
Greece	1,00
Spain	1,00
France	1,00
Ireland	1,00
Italy	1,00
Cyprus	0,58
Latvia	0,70
Lithuania	3,45
Luxembourg	1,00
Hungary	251,35
Malta	0,43
Netherlands	1,00
Austria	1,00
Poland	3,78
Portugal	1,00
Romania	3,34
Slovenia	1,00
Slovakia	33,78
Finland	1,00
Sweden	9,25
UK	0,68
Switzerland	1.564613

Average Exchange Rate 2007 (www.ecb.eu)
Source for Switzerland: Teligen of 1.08.2007

For data as of 1st October 2008:

	Euro
Belgium	1,00
Bulgaria	1,96
Czech Republic	24,51
Denmark	7,46
Germany	1,00
Estonia	15,65
Greece	1,00
Spain	1,00
France	1,00
Ireland	1,00
Italy	1,00
Cyprus	0,58
Latvia	0,71
Lithuania	3,45
Luxembourg	1,00
Hungary	241,65
Malta	0,43
Netherlands	1,00
Austria	1,00
Poland	3,38
Portugal	1,00
Romania	3,81
Slovenia	1,00
Slovakia	30,30
Finland	1,00
Sweden	9,73
UK	0,79
Switzerland	1.564613

Exchange Rate 1st October 2008 (www.ecb.eu)
Source for Switzerland: Teligen of 1.08.2007

5.2 Exchange rates used for retail tariffs (mobile tariffs, public voice telephony tariffs)

	Euro
Belgium	1
Bulgaria	0.51114
Czech Republic	0.04136
Denmark	0.13429
Germany	1
Estonia	0.06382
Greece	1
Spain	1
France	1
Ireland	1
Italy	1
Cyprus	1
Latvia	1.3887
Lithuania	0.28598
Luxembourg	1
Hungary	0.00385
Malta	1
Netherlands	1
Austria	1
Poland	0.27906
Portugal	1
Romania	1*
Slovenia	1
Slovakia	0.03278
Finland	1
Sweden	0.10115
UK	1.26936
Japan	0.00801
USA	0.78481
Switzerland	0.639136

Exchange Rate 1st October 2008 (www.ecb.eu)
Source for Switzerland: Teligen of 1.08.2007

5.3 Population

	2007	2008
BE	10511382	10666866
BG	7679290	7640238
CZ	10287189	10381130
DK	5447084	5475791
DE	82310995	82221808
EE	1342409	1340935
EL	11170957	11214992
ES	44474631	45283259
FR	63392140	63753140
IE	4209019	4419859
IT	59131287	59618114
CY	778537	79458
LV	2281305	2270894
LT	3384879	3366357
LU	459500	483799
HU	10064000	10045000
MT	406020	410584
NL	16357992	16404282
AT	8298923	8331930
PL	38125479	38115641
PT	10599095	10617575
RO	21565119	21528627
SI	2010377	2025866
SK	5393637	5400998
FI	5276955	5300484
SE	9113257	9182927
UK	60798438	61185981
EU	494869896	497481657
CH	7593500	7700200

Source: Eurostat website
Source for Switzerland: Swiss Federal Statistical Office

5.4 Population broadband data

	2007 Broadband data	2008 Broadband data
Belgium	10584534	10666866
Bulgaria	7679290	7640238
Czech Republic	10287189	10381130
Denmark	5447084	5475791
Germany	82314906	82217837
Estonia	1342409	1340935
Ireland	4312526	4401335
Greece	11171740	11213785
Spain	44474631	45283259
France	63392140	63753140
Italy	59131287	59619290
Cyprus	778684	789258
Latvia	2281305	2270894
Lithuania	3384879	3366357
Luxembourg	476187	483799
Hungary	1066158	1045401
Malta	407810	410290
Netherlands	16357992	16405399
Austria	8298923	8331930
Poland	38125479	38115641
Portugal	10599095	10617575
Romania	21565119	21528627
Slovenia	210377	225866
Slovakia	5393637	5400998
Finland	5276955	5300484
Sweden	9113257	9182927
United Kingdom	60816701	61185981
EU	49590294	49745533
CH	7593500	7700200

Source: Eurostat website
Source for Switzerland: Swiss Federal Statistical Office

Chapter 6

OECD telecommunications basket definitions

6.1 Composite national – international basket

1. This basket is based on a combination of the national and international baskets. The international basket is scaled using a fixed number of international calls.
2. Business basket results exclude VAT. Residential basket results include VAT.
3. The number of calls to fixed line phones (i.e. excluding calls to mobile phones) is defined as:

Number of national fixed line calls	Calls per year
Business basket	3600
Residential basket	1200

4. The international portion of the basket shall have a number of calls equal to 6% of the national fixed line calls, in addition to the calls defined in the national portion of the basket.

	International calls per year
Business basket	216
Residential basket	72

5. Calls to mobile phones are added to the basket. The number of calls shall be 10% of the number of national fixed line calls, in addition to the fixed line calls.

Calls to mobile phones	Calls per year	Call duration
Business basket	360	2
Residential basket	120	2

6. A weighted distribution over six time and day points is used. Call charges relevant at each of these time and day points shall be used.

Day/Time	We 11:00	We 15:00	We 20:00	We 03:00	Sa 11:00	Su 15:00
Bus	45.4	40.6	7	0.8	5.7	0.5
Res	14.3	22.1	31.6	3	13	16

Bus = Business basket, Res = Residential basket. All weights in percent of total number of fixed line calls. We = Weekdays, Sa = Saturdays, Su = Sundays.

7. Call duration will vary with distance and time of day. The charge for each call shall reflect the actual charge for the duration in question, as defined by the tariff. Call setup and minimum charges shall be included.

Day/Time	Weekday daytime			Weekday evenings, nights and weekends		
Distance	3-12 Km	17-40 Km	75-490 Km	3-12 Km	17-40 Km	75-490 Km
Bus	3.5	3.5	3.5	3.5	3.5	3.5
Res	2.5	3.5	3.5	3.5	6	7

Bus = Business basket, Res = Residential basket. Duration in minutes per call.

6.2 New OECD baskets for PSTN 2006

1. Number of calls per year

Number of calls per year	National calls	Calls to mobile	International calls	Total calls
Residential Low	456	114	30	600
Residential Medium	900	276	24	1200
Residential High	1560	744	96	2400
Business SOHO	1206	522	72	1800
Business SME	2016	560	224	2800

The SME basket shall also reflect 30 lines and users.

2. Distribution over time

Fixed calls distribution over time	WD 11.00	WD 15.00	WD 20.00	WD 3.00	SA 11.00	SU 15.00
Residential Low	30.2%	28.1%	23.6%	0.9%	8.2%	9.0%
Residential Medium	27.5%	28.0%	23.0%	2.0%	8.0%	11.5%
Residential High	30.0%	30.4%	20.0%	0.6%	8.5%	10.5%
Business SOHO	39.5%	39.3%	7.5%	3.6%	5.5%	4.6%
Business SME	40.2%	40.5%	6.5%	3.4%	4.7%	4.7%
Mobile calls distribution over time	**WD 11.00**	**WD 15.00**	**WD 20.00**	**WD 3.00**	**SA 11.00**	**SU 15.00**
Residential Low	28.6%	28.6%	20.5%	0.6%	10.1%	11.6%
Residential Medium	29.1%	30.5%	20.5%	0.7%	8.5%	10.7%
Residential High	30.0%	30.4%	20.0%	0.6%	8.5%	10.5%
Business SOHO	39.5%	39.5%	4.5%	0.3%	9.0%	7.2%
Business SME	44.0%	42.0%	1.2%	0.1%	6.3%	6.4%

3. Distribution over distance (km)

Fixed calls distribution over distance	3	7	12	17	22	27	40	75	110	135	175	250	350	490
Residential Low	62.0%	14.5%	5.2%	3.1%	1.6%	2.1%	2.1%	2.1%	1.2%	1.0%	0.8%	0.8%	0.6%	2.9%
Residential Medium	56.7%	13.3%	4.7%	2.8%	1.4%	3.2%	3.2%	3.2%	1.9%	1.6%	1.3%	1.3%	1.0%	4.4%
Residential High	63.0%	14.7%	5.2%	3.1%	1.6%	1.9%	1.9%	1.9%	1.1%	0.9%	0.7%	0.7%	0.6%	2.7%
Business SOHO	55.5%	13.0%	4.6%	2.9%	1.5%	3.3%	3.3%	3.3%	2.0%	1.7%	1.4%	1.4%	1.1%	5.0%
Business SME	57.2%	13.4%	4.9%	3.0%	1.5%	3.0%	3.0%	3.0%	1.8%	1.5%	1.2%	1.2%	0.9%	4.4%

4. Call durations in minutes

Calls durations 3-22km	WD 11.00	WD 15.00	WD 20.00	WD 3.00	SA 11.00	SU 15.00
Residential Low	3.7	3.7	4.7	4.7	4.5	4.5
Residential Medium	3.7	3.7	4.7	4.7	4.5	4.5
Residential High	3.7	3.7	4.7	4.7	4.5	4.5
Business SOHO	1.9	1.9	2.1	2.1	2.3	2.3
Business SME	1.9	1.9	2.1	2.1	2.3	2.3
Calls durations >22km	**WD 11.00**	**WD 15.00**	**WD 20.00**	**WD 3.00**	**SA 11.00**	**SU 15.00**
Residential Low	4.4	4.4	7.0	7.0	6.6	6.6
Residential Medium	4.4	4.4	7.0	7.0	6.6	6.6
Residential High	4.4	4.4	7.0	7.0	6.6	6.6
Business SOHO	2.2	2.2	3.0	3.0	3.1	3.1
Business SME	2.2	2.2	3.0	3.0	3.1	3.1
Calls durations to mobile	**WD 11.00**	**WD 15.00**	**WD 20.00**	**WD 3.00**	**SA 11.00**	**SU 15.00**
Residential Low	1.8	1.8	2.1	2.1	1.9	1.9
Residential Medium	1.8	1.8	2.1	2.1	1.9	1.9
Residential High	1.8	1.8	2.1	2.1	1.9	1.9
Business SOHO	1.6	1.6	1.7	1.7	1.7	1.7
Business SME	1.6	1.6	1.7	1.7	1.7	1.7

5. International calls

	Distribution		Call duration (minutes)	
	Peak	Off-Peak	Peak	Off-Peak
Residential Low	33.0%	67.0%	5.5	7.2
Residential Medium	33.0%	67.0%	5.5	7.2
Residential High	33.0%	67.0%	5.5	7.2
Business SOHO	80.0%	20.0%	2.9	3.9
Business SME	80.0%	20.0%	2.9	3.9

6.3 International PSTN basket

1. The international PSTN basket, when used separately, shall reflect the cost of a single call, calculated according to the weighting method described below. No fixed charges are included.
2. Business basket results exclude VAT. Residential basket results include VAT.
3. Call charges for calls to all other OECD Member States shall be used. Peak and off-peak time call charges are used, defined as the highest (most expensive) charge and the lowest (least expensive) charge.
4. Call cost is based on average per minute charge. Call setup charges and/or different charges for first and additional minutes are included.
5. The charges to different destinations are weighted according to the ITU call volume statistics. An average over the latest 5 years of available traffic statistics is used. As there may be gaps in the ITU statistics for certain destinations from some countries, calls on such routes are excluded from the calculation.
6. Call charges are weighted between peak and off-peak:

	Peak time	Off-peak time
Business basket	75.0%	25.0%
Residential basket	25.0%	75.0%

7. Call duration differ between peak and off-peak time:

	Peak time	Off-peak time
Business basket	3 minutes	5 minutes
Residential basket	3 minutes	5 minutes

6.4 OECD mobile baskets

6.4.1 2002 Basket

1. All baskets will include:
   - Registration or installation charges with 1/3 of the charges, i.e. distributed over 3 years
   - Monthly rental charges, and any option charges that may apply to the package, or package combination
2. The three new baskets are:
   - Low user basket. The usage level of this basket is low, with a call volume less than half of that in the Medium
   - Medium user basket. This basket will have 75 outgoing calls per month
   - High user basket. The usage level is about twice the Medium user basket
3. The usage profiles will also include a number of SMS messages per month.
4. Call and message volumes for each basket are:

	Outgoing calls /month	SMS per month
Low user	25	30
Medium user	75	35
High user	150	42

5. The information received showed that there is little difference between the average pre-paid usage and the low user post-paid usage. The low user basket can therefore be used for both pre- and post-paid tariffs, allowing a simple comparison also between the two types.

6. Only national calls are included in the profiles, with 4 different destinations:
   - Local area fixed line calls. This is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of calls is included in the National
   - National fixed line calls. This covers all fixed line calls outside the local area, except in cases as noted above
   - Same network mobile calls (On-net). This includes all calls made to mobiles in the same mobile network as the caller
   - Other network mobile calls (Off-net). This includes calls to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to 3 other networks will be considered in each country
7. Distributions per destination for each basket are:

% of total number of calls	Fixed Local	Fixed National	On-net mobile	Off-net mobile
Low user	28.0%	14.0%	40.0%	18.0%
Medium user	24.0%	12.0%	43.0%	21.0%
High user	26.0%	14.0%	42.0%	18.0%

8. As the information received produced little evidence on the split between local and national fixed line calls, the assumption has been used that the ratio would be 2:1 for local:national, i.e. 67% local and 33% national. This assumption is taken from the averages in fixed baskets, and the scarce information received.
9. Instead of splitting time and day into distinct times and days the following approach will be used:
   - Peak time calls at weekdays, most expensive time during daytime
   - Off-peak time calls at weekdays, cheapest time before midnight
   - Weekend time calls, at daytime Sundays
10. Distributions over time and day for each basket are:

% of total number of calls	ToD Peak	ToD Off-peak	ToD Weekend
Low user	38.0%	35.0%	27.0%
Medium user	47.0%	30.0%	23.0%
High user	63.0%	22.0%	15.0%

11. There will be 3 separate call durations:
    - Local and national fixed line calls
    - Same network mobile calls (On-net)
    - Other network mobile calls (Off-net)
12. Call durations for each basket are:

Minutes per call	Duration Fixed National	Dur Mobile On-net	Dur Mobile Off-net
Low user	1.6	1.4	1.4
Medium user	2.1	1.9	1.9
High user	2.2	2.0	2.1

13. Any call allowance value included in the monthly rental will be deducted from the usage value once the basket is calculated. The deduction cannot be larger than the actual usage value, i.e. negative usage is not allowed. No transfer of unused value to next month is taken into account.

14. Any inclusive minutes will be deducted from the basket usage before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern that is described in the basket, i.e. the same peak/off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.
15. Any inclusive SMS-messages will be deducted from the basket before starting the calculation of the SMS message cost, up to the number of messages in the basket.
16. For each of the operators covered a set of packages shall be included so that the cheapest package offered by that operator can be calculated for each of the 3 baskets.
17. Multiple operators in each country shall be included, with at least the two operators with highest number of subscribers in each country. The operators included shall have a total market share of at least 50% based on subscriber numbers.
18. Basket results are calculated for a period of one year.

6.4.2 2006 Baskets

1. The basket structure remains the same as with the previous (2002) version of the baskets. All baskets will include:
   - Registration or installation charges with 1/3 of the charges, i.e. distributed over 3 years
   - Monthly rental charges, and any option charges that may apply to the package, or package combination
   - Usage charges for voice calls and SMS and MMS message, as defined by the usage profile
2. The three new baskets are:
   - Low user basket. The usage level of this basket is low, with a call volume less than half of that in the Medium user basket
   - Medium user basket. This basket will have 65 outgoing calls per month
   - High user basket. The usage level is about twice the Medium user basket
3. The usage profiles will also include a number of SMS and MMS messages per month. The number of MMS is low, reflecting a new service with still little use.
4. Call and message volumes for each basket are:

	Outgoing calls /month	SMS per month	MMS per month
Low user	30	33	0.67
Medium user	65	50	0.67
High user	140	55	1

5. There is little difference between the average pre-paid usage and the low user post-paid usage. The low user basket can therefore be used for both pre- and post-paid tariffs, allowing a simple comparison also between the two types.
6. Only national calls are included in the profiles, with 5 different destinations:
   - Local area fixed line calls. This is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of calls is included in the National
   - National fixed line calls. This covers all fixed line calls outside the local area, except in cases as noted above
   - Same network mobile calls (On-net). This includes all calls made to mobiles in the same mobile network as the caller

- Other network mobile calls (Off-net). This includes calls to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to 3 other networks will be considered in each country
- Voicemail calls. This reflects calls made to retrieve voicemail messages from the on-net voicemail service

7. Distributions per destination for each basket are:

% of total number of calls	Fixed Local	Fixed National	On-net mobile	Off-net mobile	Voicemail
Low user	15.0%	7.0%	48.0%	22.0%	8.0%
Medium user	14.0%	7.0%	48.0%	24.0%	7.0%
High user	13.0%	7.0%	47.0%	26.0%	7.0%

8. As there is little evidence on the split between local and national fixed line calls, the assumption has been used that the ratio would be 2:1 for local:national, i.e. 67% local and 33% national. This assumption is taken from the averages in fixed baskets, and the scarce information received.

9. Instead of splitting time and day into distinct times and days the following approach will be used:

   - Peak time calls at weekdays, most expensive time during daytime
   - Off-peak time calls at weekdays, cheapest time before midnight
   - Weekend time calls, at daytime Sundays.

10. Distributions over time and day for each basket are:

% of total number of calls	ToD Peak	ToD Off-peak	ToD Weekend
Low user	48.0%	25.0%	27.0%
Medium user	50.0%	24.0%	26.0%
High user	60.0%	19.0%	21.0%

11. There will be 4 separate call durations:

    - Local and national fixed line calls
    - Same network mobile calls (On-net)
    - Other network mobile calls (Off-net)
    - Voicemail calls

12. Call durations for each basket are:

Minutes per call	Duration Fixed National	Dur Mobile On-net	Dur Mobile Off-net	Dur Voicemail
Low user	1.5	1.6	1.4	0.8
Medium user	1.8	1.9	1.7	0.8
High user	1.7	1.9	1.8	0.8

13. Any call allowance value included in the monthly rental will be deducted from the usage value once the basket is calculated. The deduction cannot be larger than the actual usage value, i.e. negative usage is not allowed. No transfer of unused value to next month is taken into account.

14. Any inclusive minutes will be deducted from the basket usage before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern that is described in the basket, i.e. the same peak/off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.

15. Any inclusive SMS and MMS-messages will be deducted from the basket before starting the calculation of the SMS and MMS message cost, up to the number of messages in the basket.

16. For each of the operators covered a set of packages shall be included so that the cheapest package offered by that operator can be calculated for each of the 3 baskets.

17. Multiple operators in each country shall be included, with at least the two operators with highest number of subscribers in each country. The operators included shall have a total market share of at least 50% based on subscriber numbers.

18. Basket results are calculated for a period of one year.