

Further Information

Swisscom is making enormous investments in the networks of the future and thus in Switzerland.

4G/LTE (Long Term Evolution): 4G/LTE is the successor technology to HSPA. LTE enables mobile broadband data speeds of up to 300 Mbps. 4G stands for “4th-generation mobile technology”.

FTTS (Fibre to the Street)/FTTB (Fibre to the Building)/FTTC (Fibre to the Curb): FTTS, FTTB and FTTC with vectoring refer to innovative, hybrid broadband connection technologies (optical fibre and copper). These technologies enable fibre-optic cables to be laid as close as possible to the building, or to the basement in the case of FTTB, while the remaining section uses the existing copper cabling.

Glossary

233 Technical terms
235 Networks
236 Other terms

Index of keywords

239 Index of keywords

Swisscom Group
five-year review

240 Swisscom Group five-year review

Glossary

Technical terms

ADSL (Asymmetric Digital Subscriber Line): A broadband data transmission technology that uses the existing copper telephone cable for broadband access to the data network. Filters at the customer end and in the network prevent mutual interference, allowing traditional analogue telephony and data transmission to exist in parallel. Depending on the line length and other factors, the transmission speed varies between 150/50 kbps and a maximum of 6,000/600 kbps.

All-IP: All-IP is the technology behind the transition to a single, unified network based on the Internet Protocol (IP). All-IP means that all services such as television, the Internet or telephony run over the same IT network based on the Internet Protocol. Phone calls are no longer transmitted using analogue signals but instead take the form of data packets, as is already the case with Internet services. Thanks to the unified All-IP network infrastructure, devices and services can communicate with one another and exchange data. In the medium and long term, Swisscom intends to migrate all existing communications networks to IP to enable all telecommunications services (telephony, data traffic, TV, mobile communications, etc.) to be offered over IP.

Bandwidth: Bandwidth refers to the transmission capacity of a medium; also known as the data transmission rate. The higher the bandwidth, the more information units (bits) can be transmitted per unit of time (second): bps, kbps, Mbps.

Connectivity: Connectivity is the generic term used to denote IP services or the connection to the Internet and the ability to exchange data with any partner on the network.

DSL (Digital Subscriber Line): DSL is the generic term for transmission technologies that use subscriber lines based entirely or partly on copper. Examples of DSL technologies: ADSL or VDSL.

EDGE (Enhanced Data Rates for GSM Evolution): EDGE is a radio modulation technology used to enhance data transmission speeds in GSM mobile networks and TDMA (Time Division Multiple Access). EDGE enables higher data transmission speeds based on the GSM standard. Up to 256 kbps can be transmitted over the Swisscom mobile network, and up to four customers can be online simultaneously. Today EDGE covers 99.8% of the Swiss population.

FTTH (Fibre to the Home): FTTH stands for the end-to-end connection of homes and offices using fibre-optic cables instead of traditional copper cables.

FTTS (Fibre to the Street)/FTTB (Fibre to the Building)/FTTC (Fibre to the Curb): FTTS, FTTB and FTTC with vectoring refer to innovative, hybrid broadband connection technologies (optical fibre and copper). With these technologies fibre-optic cables are laid as close as possible to the building, or up to the basement in the case of FTTB, while the remaining section uses the existing copper cabling.

GPRS (General Packet Radio Service): GPRS significantly accelerates the transmission speed in GSM mobile communications networks. Currently, GPRS enables speeds of 30 to 40 kbps. GPRS is ideal for WAP services and entertainment offerings as well as sending and receiving e-mails.

GSM (Global System for Mobile communications) network: GSM is a global digital mobile communications standard which, in addition to voice and data transmission, enables services such as SMS messaging and connections to and from countries abroad (international roaming).

HSPA (High-Speed Packet Access): HSPA is a further development of the UMTS mobile communications standard. HSPA enables large volumes of data to be transmitted at faster speeds. HSPA allows far more customers to use the same radio cell simultaneously and at a consistently high speed than would be possible with UMTS. HSPA is upgraded to HSPA+ at locations where mobile Internet use is particularly concentrated. This technology speeds up transmission to a maximum rate of 42 Mbps.

ICT (Information and Communication Technology): A term coined in the 1980s, combining the terms information technology and communication technology. The collective term denotes the convergence of information technology (information and data processing and the related hardware) and communication technology (technically aided communications).

IP (Internet Protocol): IP enables different types of services to be integrated on a single network. Typical applications are virtual private networks (VPN), telephony (Voice over IP) and fax (Fax over IP).

IPTV (Internet Protocol Television): IPTV refers to the digital broadcasting of broadband applications (for example, television programmes and films) over an IP network.

ISP (Internet Service Provider): An ISP is a provider of Internet-based services; also commonly referred to as Internet Provider. Services include Internet connection (using DSL, for example), hosting (registration and operation of Internet addresses, websites and web servers) and content provision.

LAN (Local Area Network): A LAN is a local network for interconnecting computers, usually based on Ethernet.

4G/LTE (Long Term Evolution): 4G/LTE is the successor technology to HSPA. LTE enables mobile broadband data speeds of up to 300 Mbps. 4G stands for fourth-generation mobile technology.

MVNO (Mobile Virtual Network Operator): MVNO is a business model for mobile communications in which a company (the MVNO) with no network infrastructure or a limited network infrastructure is able to access the infrastructure of other mobile communications providers.

Optical fibre: Optical fibre is used as a transport medium for optical data transmission.

OTT (Over the Top): OTT refers to content distributed by service providers over an existing network infrastructure without operating the infrastructure themselves. OTT companies offer proprietary services on the basis of the infrastructures of other companies in order to reach a broad range of users quickly and cost-efficiently.

PWLAN (Public Wireless Local Area Network): A PWLAN is a public local area network which enables data access using different wireless transmission technologies. Swisscom customers can access the PWLAN at more than 1,200 hotspots in Switzerland and over 65,000 worldwide. All that is required is a laptop, PDA or mobile telephone, a WLAN card and access via a telecommunications provider. Maximum transmission capacity in the PWLAN is 2 Mbps.

Roaming: Roaming enables mobile network subscribers to use their mobile phones when travelling abroad. The mobile telephone of a subscriber outside Switzerland automatically selects the best-quality partner network. Information indicating the country and region where the mobile phone is located at any given time is sent to the exchange in Switzerland where the mobile phone is registered. On receipt of the calling signal, the exchange in Switzerland transmits it within a fraction of a second to the right region in the respective country, where the signal is forwarded to the base station in whose vicinity the mobile phone is located. The base station then forwards the signal to the mobile phone and the call can be taken. Roaming only works if all countries involved operate on the same frequency bands. In Europe all GSM networks use the same frequency bands. Other countries such as the USA or countries in South America use a different frequency range. Most mobile telephones today are triband or quadband and support 900 MHz and 1,800 MHz networks (which are most commonly used in Europe) as well as 850 MHz and 1,900 MHz networks.

Router: A router is a device for connecting or separating several computer networks. The router analyses incoming data packets according to their destination address, and either blocks them or forwards them accordingly (packet routing).

TDM (Time Division Multiplexing): Multiplexing is a method which allows the simultaneous transmission of multiple signals over a single communications medium (line, cable or radio link), for example, by means of classic telephony (using an ISDN or analogue line). Multiplexing methods are often combined to achieve even higher utilisation. The signals are multiplexed once the user data have been modulated on a carrier signal. At the receiver end they are then demultiplexed and demodulated.

TIME (Telecommunications, Information, Media, Entertainment): The TIME market covers applications in the areas of telecommunications, IT, media and entertainment.

UMTS (Universal Mobile Telecommunications System): UMTS is an international third-generation mobile communications standard that combines mobile multimedia and telematic services within the 2 GHz frequency spectrum. A further development of GSM, UMTS complements GSM and Public Wireless LAN in urban regions of Switzerland. Data transmission speeds of up to 384 kbps can be achieved, enabling the transmission of short video clips, for example. Today the UMTS network covers around 93% of the Swiss population.

Unified Communications: An attempt used to integrate the wide variety of modern communication technologies. Different telecommunication services such as e-mail, unified messaging, telephony, mobile, PDAs, instant messaging and presence functions are coordinated to enhance the reachability of dispersed communication partners, thereby speeding up business processes.

Vectoring: Interference between copper wire pairs is eliminated by replacing the hardware in neighbourhood distribution cabinets. From a technical standpoint, this allows existing bandwidths to be doubled or trebled.

VDSL (Very High Speed Digital Subscriber Line): VDSL is currently the fastest DSL technology, allowing data transmission speeds of over 50 Mbps.

Video on Demand: A service that allows subscribers to choose from a selection of films and to watch the selected film at any time. The film is delivered to the subscriber either over the broadband cable network or over DSL and the telephone network.

VoIP (Voice over Internet Protocol): VoIP is used to set up telephone connections via the Internet.

VPN (Virtual Private Network): VPN is generally used to refer to logical private subnetworks set up within a public network. The most common interpretation of VPN at present is IP-VPN, where subscribers are connected over IP tunnels.

WLAN (Wireless Local Area Network): A WLAN is a network that connects several computers wirelessly and links them to a central information system, printer or scanner.

Networks

Access network: Swisscom's access network largely consists of twisted copper-wire pairs and extends to practically every household in Switzerland. It also deploys add-on technologies such as microwave radio and fibre optics. In 2000, Swisscom rolled out ADSL broadband technology, which today delivers reliable, top-quality services to over 98% of households in Switzerland. Local and geographical redundancy in the network elements and data centres assures high availability. Swisscom also guarantees nationwide broadband Internet access as part of its universal service provision mandate. In addition to fibre-optic and DSL technologies, Swisscom uses wireless technologies such as UMTS and satellite to fulfil this mandate. To facilitate the provisioning of new bandwidth-hungry services such as IPTV and video telephony while also meeting the growing demand for faster Internet connections, Swisscom started supplementing its broadband offerings with VDSL technology in 2006. This technology allows the transmission of multiple TV streams in

standard quality or in high-definition quality (HDTV) at the same time as using a high-speed Internet connection. Today, a large number of Swiss households already receive live TV, video-on-demand, pay-per-view and radio in excellent quality. Swisscom began extending optical fibre to homes and offices (FTTH) in 2008. In future, fibre-optic technology will enable bandwidths in the gigabit range.

Data networks: Swisscom has several leased-line networks which are supplemented by an SDH (Synchronous Digital Hierarchy) and an Ethernet platform. These support bandwidths of 2 Mbps to 10 Gbps and are ideal for business customers requiring permanent point-to-point broadband connectivity free from the risk of overload. Redundancies are tailored to customers' individual requirements concerning availability and security.

Fixed network: Swisscom operates a nationwide PSTN/ISDN network infrastructure, different data networks and a broadband and IP network. The infrastructure comprises the access and transport network as well as different service platforms for telephony and data services.

Mobile network: Swisscom operates a nationwide mobile network in Switzerland. The mobile services it provides are based on GSM and UMTS, the two dominant digital standards across Europe and much of the world. Swisscom has implemented different technologies that enable transmission between handsets and base stations. In 2005, it enhanced all active GSM antennas with EDGE technology, a further development of GPRS. EDGE enables bandwidths of between 150 kbps and 200 kbps and currently covers 99% of the Swiss population. Swisscom began rolling out UMTS as far back as 2004, and since 2006 has continued to expand its mobile network using HSPA/HSPA+. This allows download speeds of up to 21 Mbps or even up to 42 Mbps in some areas. By the end of 2012, UMTS/HSPA was available to around 93% of the Swiss population. Swisscom thus possesses the most efficient mobile network in Switzerland and will continue to expand its technological lead. Swisscom took another major step in 2011 when it became the first mobile provider in Switzerland to launch a field trial with LTE. Since December 2012 Swisscom's 4G/LTE offerings have already been available to 20% of the Swiss population. At present LTE supports bandwidths of up to 150 Mbps.

Next-generation network: To enable more cost-effective use of new services such as VoIP and convergent solutions in the future, Swisscom is investing in an All-IP network infrastructure. This structure allows Swisscom to offer services irrespective of the type of access technology selected (copper, wireless or fibre optic). Having migrated the data transport network to IP, commissioned an IP-based telephony and multimedia platform, and launched its first IP-based services such as Swisscom TV and VoIP, Swisscom has already gained experience in All-IP offerings. The first products based solely on IP were already rolled out in 2009 and supplemented in 2010 by a wide range of new services and bundled offerings.

PSTN network: The PSTN network connects virtually all private households and a large proportion of business customers in Switzerland. Four-fold redundancy in the core network and two-fold redundancy in the switching layer ensure excellent voice quality and optimum security and availability.

Transport network: The transport network is an exclusively digital network that supports the transmission of voice, video and data services between access networks. All transmission points are equipped with optical fibre and enable the provision of Ethernet services for business customers as well as VDSL connectivity.

Other terms

BSA (bit stream access): Regulated bit-stream access is a high-speed link which Swisscom sets up on the last mile (on a metallic pair cable from the local exchange to the home) and makes available to other telecoms service providers (TSP) as an upstream service at a price regulated by the government. TSPs can use this link, for example, to offer their customers broadband services or fast Internet access.

Collocation: Collocation is governed by the Ordinance on Telecommunications Services (Verordnung über Fernmeldedienste, FDV). The market-dominant provider offers alternative providers non-discriminatory access to the required locations so that they can use the location and install and operate their own telecommunications systems at that location.

ComCo (Competition Commission): ComCo enforces the Federal Cartel Act, the aim of which is to safeguard against the harmful economic or social impact of cartels and other constraints on competition, and in so doing foster competition. ComCo combats harmful cartels and monitors market-dominant companies for signs of anti-competitive conduct. It is also responsible for examining mergers and issuing statements on official decrees that affect competition.

ComCom (Federal Communications Commission): ComCom is the decision-making authority for telecommunications. Its primary responsibilities include issuing concessions for use of the radio frequency spectrum as well as basic service licences. It also provides access (unbundling, interconnection, leased lines, etc.), approves national numbering plans and regulates the conditions governing number portability and freedom of choice of service provider.

COSO/COSO ERM (Committee of Sponsoring Organizations of the Treadway Commission): COSO is a voluntary, private-sector US organisation. Its goal is to qualitatively improve financial reporting through ethical conduct, effective internal controls and good corporate management. The Enterprise Risk Management (ERM) Framework is an extension of COSO's Internal Control Framework.

ERM (Enterprise Risk Management): ERM is a Group-wide management system that ensures the assessment, handling and reporting of significant risks at Group level as well as Group-company level.

Ex-ante: In an ex-ante regime, the particulars of the regulated offerings (commercial, technical and operating conditions) must be approved by a government authority (authorisation obligation). The conditions approved by the authority (for example, price) are known to the parties using the regulated services. There is legal provision for the affected providers to establish that the price has been correctly determined.

Ex-post: In an ex-post regime, the parties must agree all possible aspects of the contractual content (primacy of negotiation). In the event of a dispute, the authorities decide only on the points on which the parties have been unable to agree (objection principle).

FTE (full-time equivalent): Throughout this report, FTE is used to denote the number of full-time equivalent positions.

Full access: Full access in connection with unbundling means providing alternative telecommunications service providers with access to subscriber lines for the purpose of using the entire frequency spectrum of metallic pair cables.

Hubbing: Hubbing relates to the trading of telephone traffic with other telecommunication operators.

Interconnection: Interconnection means linking up the systems and services of two TSPs so as to enable the logical interaction of the connected telecoms components and services and to provide access to third-party services. Interconnection allows the customer of one provider to communicate with the subscribers of another provider. Under the terms of the Federal Telecommunications Act, market-dominant TSPs are required to allow their competitors interconnection at cost-based prices (LRIC, see below).

ISO (9001, 14001-14064, 15504, 27001, 31000): The International Organization for Standardization (ISO) draws up international standards in all fields with the exception of electricity and electronics, for which the International Electrotechnical Commission (IEC) is responsible, and with the exception of telecommunications, for which the International Telecommunication Union (ITU) is responsible. Together, these three organisations form the WSC (World Standards Cooperation). The relevant ISO standards are ISO 9001: Quality Management System – Requirements; ISO 14001

to ISO 14064: Environmental Management System; ISO 15504 Software Process Improvement and Capability Determination (SPICE); ISO 27001 Information Technology – IT Security Techniques – Information Security Management Systems – Requirements; ISO 31000: Risk Management Principles and Guidelines. These standards govern the principles and general requirements for the risk management process.

Last mile: Also referred to as the local loop, the last mile denotes the subscriber access line between the subscriber access point and the local exchange. In Switzerland, as in most other countries, access to the last mile is regulated (unbundling).

LRIC (Long-Run Incremental Costs): LRIC is the method defined by the Ordinance on Telecommunications Services (Verordnung über Fernmeldedienste, FDV) for calculating regulated prices. It is future-oriented and therefore creates economically efficient investment incentives.

OFCOM (Federal Office of Communications): OFCOM deals with issues related to telecommunications and broadcasting (radio and television), and performs official and regulatory tasks in these areas. It prepares the groundwork for decisions by the Federal Council, the Federal Department for Environment, Transport, Energy and Communications (DETEC) and the Federal Communications Commission (ComCom).

Termination charges: Termination charges are levied by a network operator for forwarding calls to another third-party network (e.g. calls from Orange to Swisscom or from Sunrise to Orange).

Unbundling: Unbundling of the last mile (Unbundling of the Local Loop, ULL) enables fixed-network competitors without their own access infrastructure to access customers directly at non-discriminatory conditions based on original cost. The prerequisite for ULL is the presence of a market-dominant provider.

Index of keywords

	Pages
Board of Directors	122–129
Capital expenditure	66–67
Compensation paid to members of the Board of Directors and the Group Executive Board	140–144
Distribution to shareholders	40
Employees	42–45; 103–110
Equity	64, 153
Fibre-optic expansion	17
Fixed and mobile network	17–18; 235–236
Goodwill	188–191
Group Executive Board	130–133
Group structure and organisation	31–32
Income taxes	180–182
Macroeconomic environment	19–20
Market shares	27–30
Net debt and financing	65, 210
Outlook	68
Pension	64, 174–177
Provisions	195–196
Recoverability	188–191
Regulation	21–23
Regulatory and antitrust proceedings	195–197
Risks	69–72
Risk Management	69–70, 128, 200–205
Segment results	52–61
Share	38–40
Strategy	34–35
Sustainability	73–114

Swisscom Group five-year review

In CHF million, except where indicated

		2008	2009	2010	2011	2012
Net revenue and results						
Net revenue		12,198	12,001	11,988	11,467	11,384
Operating income before depreciation and amortisation (EBITDA)		4,806	4,702	4,599	4,584	4,381
EBITDA as % of net revenue	%	39.4	39.2	38.4	40.0	38.5
Operating income (EBIT) before impairment losses on goodwill		2,651	2,707	2,627	2,681	2,431
Operating income (EBIT)		2,651	2,707	2,627	1,126	2,431
Net income		1,749	1,938	1,788	694	1,762
Share of net income attributable to equity holders of Swisscom Ltd		1,754	1,941	1,813	683	1,755
Earnings per share	CHF	33.87	37.47	35.00	13.19	33.88

Balance sheet and cash flows

Equity at end of year		4,926	6,212	5,350	4,296	4,156
Equity ratio at end of year	%	21.3	28.0	25.4	22.1	20.7
Cash flow provided by operating activities		4,126	4,395	4,024	3,951	4,245
Capital expenditure in property, plant and equipment and other intangible assets		2,050	1,987	1,903	2,095	2,529
Net debt at end of period		10,071	9,141	8,848	8,309	8,071

Employees

Full-time equivalent employees at end of year	number	19,943	19,479	19,547	20,061	19,514
Average number of full-time equivalent employees	number	19,801	19,813	19,464	19,832	19,771

Operational data at end of period

Fixed access lines in Switzerland	in thousand	3,556	3,391	3,233	3,120	3,013
Broadband access lines retail in Switzerland	in thousand	1,334	1,478	1,584	1,661	1,727
Mobile access lines in Switzerland	in thousand	5,359	5,602	5,828	6,049	6,217
Swisscom TV access lines in Switzerland	in thousand	118	232	421	608	791
Unbundled fixed access lines in Switzerland	in thousand	31	153	255	306	300
Broadband access lines in Italy	in thousand	1,483	1,644	1,724	1,595 ¹	1,767

Swisscom share

Par value per share at end of year	CHF	1.00	1.00	1.00	1.00	1.00
Number of issued shares at end of period	in million of shares	53.441	51.802	51.802	51.802	51.802
Market capitalisation at end of year		17,587	20,491	21,296	18,436	20,400
Closing price at end of period	CHF	339.50	395.60	411.10	355.90	393.80
Closing price highest	CHF	442.75	400.90	420.80	433.50	400.00
Closing price lowest	CHF	292.00	293.50	358.00	323.10	334.40
Ordinary dividend per share	CHF	19.00	20.00	21.00	22.00	22.00 ²
Ratio payout/earnings per share	%	56.10	53.38	60.00	166.85	64.94

¹ As a result of the settlement of litigations Fastweb reduced the number of access lines by 197,000.

² In accordance with the proposal of the Board of Directors to the Annual General Meeting.

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