

3 FINANCIAL RISK MANAGEMENT

Risk management objectives, principles and framework including governance, organisation and processes as well as description of risks i.e. strategic, financial and operational risks are described in the Operating and financial review (OFR).

➤ See also *Risk management on page 21*.

3.1 Commodity market risks

Commodity market risk refers to the negative effects of market price movements or volume changes in electricity, fuels and environmental values. A number of different methods, such as Value-at-Risk and Profit-at-Risk, are used throughout Fortum to quantify these risks taking into account their interdependencies. Stress-testing is carried out in order to assess the effects of extreme price movements on Fortum's earnings.

Commodity market risk management aims to capture potential upside by optimising hedging or by trading in the markets. Risk taking is limited by risk mandates. Risk mandates include the Group minimum EBITDA mandate approved by the CEO and volumetric limits, Value-at-Risk limits and Stop-Loss limits.

3.2 Electricity price and volume risks

Strategies for hedging the electricity price are developed and executed by the Trading and Industrial Intelligence unit in co-operation with the divisions within set mandates approved by the CEO. In the Nordic markets, the hedging strategies are executed by entering into commodity derivatives contracts. The majority of electricity price risk in Russia is hedged with physical fixed priced delivery contracts. Hedging strategies for Russia are developed in line with the development of the financial electricity market. Risk in the hedging strategies and their execution are continuously evaluated in accordance with models approved by the Chief Risk Officer and mandates approved by CEO.

Fortum's sensitivity to electricity market price is dependent on the hedge level for a given time period. The hedge ratio on 31 December 2011 was approximately 65% for the year 2012 and 40% for 2013. Assuming no changes in generation volumes, hedge ratios or cost structure a 1 EUR/MWh change in the market price of electricity would affect Fortum's 2012 profit before income tax by approximately EUR 18 million and for 2013 by approximately EUR 30 million. The volume used in this sensitivity analysis is 50 TWh which includes the electricity generation sold to the spot market in Sweden and Finland in the Power and Heat segments without minority owner's shares of electricity or other pass-through sales. This volume is

heavily dependent on price level, the hydrological situation, the length of annual maintenance periods and availability of power plants. Sensitivity is calculated only for electricity market price movements. Hydrological conditions, temperature, CO₂ allowance prices, fuel prices and the import/export situation all affect the electricity price on short-term basis and effects of individual factors cannot be separated.

3.2.1 Sensitivity arising from financial instruments according to IFRS 7

Sensitivity analysis shows the sensitivity arising from financial electricity derivatives as defined in IFRS 7. These derivatives are used in hedging and proprietary trading purposes within Fortum. Sensitivities are calculated based on 31 December 2011 (31 December 2010) position. Positions are actively managed in the day-to-day business operations and therefore the sensitivities vary from time to time. Sensitivity analysis includes only the market risks arising from derivatives i.e. the underlying physical electricity sales and purchase are not included. Sensitivity is calculated with the assumption that electricity forward quotations in NASDAQ OMX Commodities Europe and in EEX would change 1 EUR/MWh for the period Fortum has derivatives.

SENSITIVITY ACCORDING TO IFRS 7

+/- 1 EUR/MWh change in electricity forward quotations, EUR million	Effect	2011	2010
Effect on Profit before income tax	-/+	3	11
Effect on Equity	-/+	44	43

3.2.2 Electricity derivatives

The tables below disclose the Group's electricity derivatives used mainly for hedging electricity price risk. The fair values represent the values disclosed in the balance sheet.

➤ See also *Note 1 Summary of significant accounting policies for accounting principles and bases for fair value estimations on page 39 and Note 7 Fair value changes of derivatives and underlying items in income statement on page 65 for the effects in the income statement regarding electricity derivatives not getting hedge accounting status.*

ELECTRICITY DERIVATIVES BY INSTRUMENT 2011

Gross	Volume, TWh				Fair value, EUR million		
	Under 1 year	1-5 years	Over 5 years	Total	Positive	Negative	Net
Sales swaps	60	35	0	95	612	53	559
Purchase swaps	35	13	0	48	36	325	-289
Purchased options	0	1	0	1	1	0	1
Written options	0	1	0	1	1	0	1
Total	95	50	0	145	650	378	272
Netting against electricity exchanges ¹⁾					-340	-340	0
Net total					310	38	272

ELECTRICITY DERIVATIVES BY ACCOUNTING STATUS 2011

Gross	Volume, TWh				Fair value, EUR million		
	Under 1 year	1-5 years	Over 5 years	Total	Positive	Negative	Net
Derivatives with hedge accounting status	58	33	0	91	432	192	240
Derivatives with non-hedge accounting status ²⁾	37	17	0	54	218	186	32
Total	95	50	0	145	650	378	272
Netting against electricity exchanges ¹⁾							
Derivatives with hedge accounting status					-183	-183	0
Derivatives with non-hedge accounting status ²⁾					-157	-157	0
Total					-340	-340	0
Net total					310	38	272
Of which long-term					79	11	68
Short-term					231	27	204

ELECTRICITY DERIVATIVES BY INSTRUMENT 2010

Gross	Volume, TWh				Fair value, EUR million		
	Under 1 year	1-5 years	Over 5 years	Total	Positive	Negative	Net
Sales swaps	76	48	0	124	44	2,113	-2,069
Purchase swaps	48	23	0	71	1,253	29	1,224
Purchased options	0	0	0	0	0	0	0
Written options	1	1	0	2	1	10	-9
Total	125	72	0	197	1,298	2,152	-854
Netting against electricity exchanges ¹⁾					-1,204	-1,204	0
Net total					94	948	-854

ELECTRICITY DERIVATIVES BY ACCOUNTING STATUS 2010

Gross	Volume, TWh				Fair value, EUR million		
	Under 1 year	1-5 years	Over 5 years	Total	Positive	Negative	Net
Derivatives with hedge accounting status	69	44	0	113	628	1,249	-621
Derivatives with non-hedge accounting status ²⁾	56	28	0	84	670	903	-233
Total	125	72	0	197	1,298	2,152	-854
Netting against electricity exchanges ¹⁾							
Derivatives with hedge accounting status					-626	-626	0
Derivatives with non-hedge accounting status ²⁾					-578	-578	0
Total					-1,204	-1,204	0
Net total					94	948	-854
Of which long-term					33	176	-143
Short-term					61	772	-711

¹⁾ Receivables and liabilities against electricity exchanges arising from standard derivative contracts with same delivery period are netted.

²⁾ Derivatives with non-hedge accounting status consist of trading derivatives and cash flow hedges without hedge accounting status.

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MATURITY ANALYSIS OF ELECTRICITY DERIVATIVES

Amounts disclosed below are non-discounted cash flows for electricity derivatives.

EUR million	2011				2010			
	Under 1 year	1-5 years	Over 5 years	Total	Under 1 year	1-5 years	Over 5 years	Total
Electricity derivatives liabilities	-319	-58	-1	-378	-1,800	-352	0	-2,152
Electricity derivatives assets	522	127	1	650	1,094	204	0	1,298

3.3 Fuel price and volume risks

Exposure to fuel prices is to some extent limited because of Fortum's flexible generation possibilities, which allow for switching between different fuels according to prevailing market conditions, and in some cases, the fuel price risk can be transferred to the customer. The remaining exposure to fuel price risk is mitigated through fixed price purchases that cover forecasted consumption levels. Fixed price purchases can be either for physical deliveries or in the form of financial hedges, such as oil and coal derivatives. In addition to this, Fortum has a proprietary trading book which includes oil and coal derivatives.

OIL DERIVATIVES

	2011		2010	
	Volume 1,000 bbl	Net fair value MEUR	Volume 1,000 bbl	Net fair value MEUR
Sales swaps and futures	10,000	-6	11,473	-93
Purchase swaps and futures	9,910	4	11,541	76

COAL DERIVATIVES

	2011		2010	
	Volume kt	Net fair value MEUR	Volume kt	Net fair value MEUR
Sold	12,325	94	6,865	-117
Bought	11,642	-80	7,985	137

3.4 Emission allowance price and volume risk

Part of Fortum's power and heat generation is subject to requirements of emission trading schemes. Fortum manages its exposure to CO₂ allowance prices related to own production through the use of CO₂ forwards and by ensuring that the costs of allowances are taken into account during production planning. Most of these CO₂ forwards are own use contracts valued at cost and some are treated as derivatives in the accounts.

In addition to own production Fortum has a proprietary trading book. These allowances are treated as derivatives in the accounts.

CO₂ EMISSION ALLOWANCE DERIVATIVES

	2011		2010	
	Volume ktCO ₂	Net fair value MEUR	Volume ktCO ₂	Net fair value MEUR
Sold	15,283	89	5,225	7
Bought	13,981	-59	8,882	-7

In 2008, Fortum, the Russian Territorial Generating Company 1 (TGC-1) and ECF Projects Ltd signed an agreement according to which Fortum will purchase emission reduction units (ERU) from TGC-1. The estimated amount of ERU's is approximately 1 million tonnes. The ERUs will come from Joint Implementation projects conducted at TGC-1's production facilities during the Kyoto Period (2008-2012) of the European Emission Trading Scheme. The agreement has been classified as an own use contract and valued at cost.

3.5 Proprietary trading risks

Fortum is trading electricity forwards, futures and options mainly on the NASDAQ OMX Commodities Europe and EEX markets, CO₂ allowances on the European market and financial coal and oil derivatives on the ICE and OTC markets.

Proprietary trading risks are monitored and reported daily, and have stringent controls in place. Overall trading mandates for Fortum are set by the CEO, and these mandates are further cascaded down to individual portfolios. Stop-loss mandates are set to limit the cumulative maximum, and "red-flag" thresholds for losses are established at predefined levels to signal the need for management involvement before reaching the stop-loss limit. Value-at-Risk mandates are set to limit the maximum level of risk at any given time.

3.6 Liquidity and refinancing risk

Fortum's business is capital intensive and the Group has a regular need to raise financing. Fortum has a diversified loan portfolio mainly consisting of long-term financing denominated in EUR and SEK. Long-term financing is primarily raised by issuing bonds under Fortum's Euro Medium Term Note programme as well as through bilateral and syndicated loan facilities from a variety of different financial institutions. Seasonal variations in working capital are generally financed by issuing short-term commercial papers under the Group's Swedish (SEK) and Finnish (EUR) Commercial Paper programmes.

Financing is primarily raised on parent company level and distributed internally through various internal financing arrangements. On 31 December 2011, 90% (2010: 91%) of the Group's total external financing was raised by the parent company Fortum Oyj.

On 31 December 2011, the total interest-bearing debt was EUR 7,770 million (2010: 7,382) and the interest-bearing net debt was EUR 7,023 million (2010: 6,826).

Fortum manages liquidity and refinancing risks through a combination of cash positions and committed credit facility agreements with its core banks. The Group shall at all times have access to cash, marketable securities and unused committed

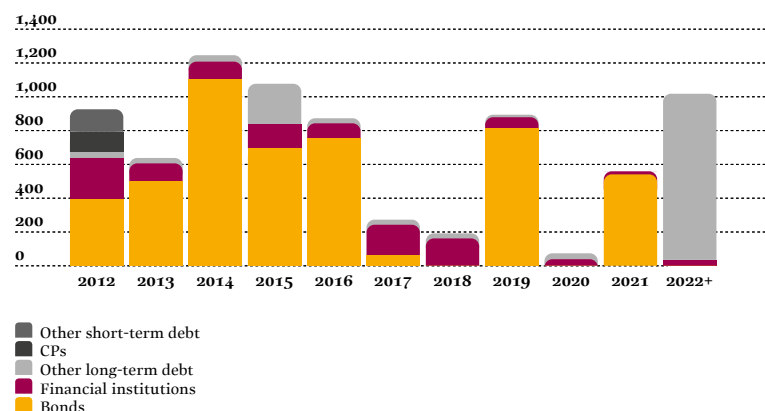
credit facilities including overdrafts, to cover all loans maturing within the next twelve-month period. However, cash/marketable securities and unused committed credit facilities shall always amount to at least EUR 500 million.

On 31 December 2011, loan maturities for the coming twelve-month period amounted to EUR 925 million (2010: 862). Liquid funds amounted to EUR 747 million (2010: 556) including OAO Fortum's bank deposits amounting to EUR 194 million (2010: 336) and the total amount of committed credit facilities amounted to EUR 2,719 million (2010: 2,918) of which EUR 2,719 million (2010: 2,918) was undrawn.

MATURITY OF INTEREST-BEARING LIABILITIES

EUR million	2011
2012	925
2013	637
2014	1,247
2015	1,077
2016	873
2017 and later	3,011
Total	7,770

LOAN MATURITIES PER LOAN TYPE, EUR million



LIQUID FUNDS, MAJOR CREDIT LINES AND DEBT PROGRAMMES 2011

EUR million	Total facility	Drawn amount	Available amount
Liquid funds			
Cash and cash equivalents			747
Bank deposits over 3 months			–
Total			747
of which Russia (OAO Fortum)			
			211
Committed credit lines			
EUR 2,500 million syndicated credit facility	2,500	–	2,500
Bilateral overdraft facilities	219	–	219
Total	2,719	–	2,719
Debt programmes (uncommitted)			
Fortum Corporation, CP programmes EUR 500 million	500	–	500
Fortum Corporation, CP programmes SEK 5,000 million	561	122	439
Fortum Corporation, EMTN programmes EUR 6,000 million	6,000	4,859	1,141
Total	7,061	4,981	2,080

Liquid funds amounted to EUR 747 million (2010: 556), including OAO Fortum's bank deposits amounting to EUR 194 million (2010: 336) earmarked for capacity increase investments in Russia. Of these deposits at year-end 2011 EUR 164 million (2010: 336) were in euros and EUR 30 million (2010: 0) in Russian roubles.

Cash and cash equivalents includes cash balances amounting to EUR 16 million presented in Assets held for sale in balance sheet.

➔ See also Note 29 Liquid funds on page 84.

LIQUID FUNDS, MAJOR CREDIT LINES AND DEBT PROGRAMMES 2010

EUR million	Total facility	Drawn amount	Available amount
Liquid funds			
Cash and cash equivalents			285
Bank deposits over 3 months			271
Total			556
of which Russia (OAO Fortum)			
			348
Committed credit lines			
EUR 1,200 million syndicated credit facility	1,200	–	1,200
EUR 1,500 million syndicated credit facility	1,500	–	1,500
Bilateral overdraft facilities	218	0	218
Total	2,918	0	2,918
Debt programmes (uncommitted)			
Fortum Corporation, CP programmes EUR 500 million	500	148	352
Fortum Corporation, CP programmes SEK 5,000 million	558	386	172
Fortum Corporation, EMTN programmes EUR 6,000 million	6,000	4,504	1,496
Total	7,058	5,038	2,020

MATURITY ANALYSIS OF INTEREST-BEARING LIABILITIES AND DERIVATIVES

Amounts disclosed below are non-discounted expected cash flows (future interest payments and amortisations) of interest-bearing liabilities and interest rate and currency derivatives.

EUR million	2011				2010			
	Under 1 year	1-5 years	Over 5 years	Total	Under 1 year	1-5 years	Over 5 years	Total
Interest-bearing liabilities	1,217	4,661	3,380	9,258	1,117	4,418	3,419	8,954
Interest rate and currency derivatives liabilities	6,309	2,855	193	9,357	8,235	734	202	9,171
Interest rate and currency derivatives receivables	-6,198	-2,858	-241	-9,297	-7,904	-771	-217	-8,892
Total	1,328	4,658	3,332	9,318	1,448	4,381	3,404	9,233

Interest-bearing liabilities include loans from the State Nuclear Waste Management Fund and Teollisuuden Voima Oyj EUR 887 million (2010: 835). These loans are renewed yearly and the related interest payments are calculated for ten years in the table above.

➔ For further information regarding loans from the State Nuclear Waste Management Fund and Teollisuuden Voima Oyj, see Note 35 Nuclear related assets and liabilities on page 89.

3.7 Interest rate risk and currency risk

3.7.1 Interest rate risk

The Treasury risk policy stipulates that the average duration of the debt portfolio shall always be kept within a range of 12 and 36 months and that the flow risk i.e. changes in interest rates shall not affect the net interest payments of the Group by more than EUR 65 million for the next rolling 12-month period. Within these mandates, strategies are evaluated and developed in order to find an optimal balance between risk and financing cost.

On 31 December 2011, the average duration of the debt portfolio (including derivatives) was 2.0 years (2010: 2.1). Approximately 47% (2010: 49%) of the debt portfolio was on a floating rate basis or fixed rate loans maturing within the next 12 month period. The effect of one percentage point change in interest rates on the present value of the debt portfolio was EUR 151 million on 31 December 2011 (2010: 150). The flow risk, measured as the difference between the base case net interest cost estimate and the worst case scenario estimate for Fortum's debt portfolio for the coming 12 months, was EUR 37 million (2010: 28).

The average interest rate on loans and derivatives on 31 December 2011 was 4.4% (2010: 3.5%). Average cumulative interest rate on loans and derivatives for 2011 was 4.4% (2010: 3.4%).

3.7.2 Currency risk

Fortum's policy is to hedge major transaction exposures to avoid exchange differences in the profit and loss statement. These exposures are mainly hedged with forward contracts.

Translation exposures in the Fortum Group are generally not hedged as the majority of these assets are considered to be long-term strategic holdings. In Fortum this means largely entities operating in Sweden, Russia, Norway and Poland, whose base currency is not euro.

The currency risk relating to transaction exposures is measured using Value-at-Risk (VaR) for a one-day period at 95% confidence level. Translation exposures relating to net investments in foreign entities are measured using a five day period at 95% confidence level. The limit for transaction exposure is VaR EUR 5 million. On 31 December 2011 the open transaction and translation exposures were EUR 1 million (2010: 2) and EUR 4,495 million (2010: 3,975) respectively. The VaR for the transaction exposure was EUR 0 million (2010: 0) and VaR for the translation exposure was EUR 57 million (2010: 57).

GROUP TREASURY'S TRANSACTION EXPOSURE

EUR million	2011			2010		
	Net position	Hedge	Open	Net position	Hedge	Open
SEK	6,334	-6,335	-1	5,964	-5,964	0
USD	211	-211	0	-197	197	0
NOK	140	-140	0	230	-230	0
RUB	219	-218	1	70	-70	0
Other	190	-189	1	123	-121	2
Total	7,094	-7,093	1	6,190	-6,188	2

In addition OAO Fortum is hedging its euro investments with euro deposits EUR 164 million (2010: 336), which qualifies as a cash flow hedge in Fortum group accounts.

Transaction exposure is defined as already contracted or forecasted foreign exchange dependent items and cash flows. Transaction exposure is divided into balance sheet exposure and cash flow exposure. Balance sheet exposure reflects currency denominated assets and liabilities for example loans, deposits and accounts receivable/payable in currencies other than the company's base currency. Cash flow exposure reflects future forecasted or contracted currency flows in foreign currency deriving from business activities such as sales, purchases or investments. Net conversion differences from transaction exposure are entered under financial income or expense when related to financial items or when related to accounts receivable/payable entered under items included in operating profit. Conversion differences related to qualifying cash flow hedges are deferred to equity.

Fortum's policy is to hedge balance sheet exposures in order to avoid exchange rate differences in the income statement. The Group's balance sheet exposure mainly relates to financing of Swedish subsidiaries and the fact that the Group's main external financing currency is EUR. For derivatives hedging this balance

exposure Fortum does not apply hedge accounting, because they have a natural hedge in the income statement.

Contracted cash flow exposures shall be hedged to reduce volatility in future cash flows. These hedges normally consist of currency derivative contracts, which are matched against the underlying future cash flow according to maturity. Fortum has currency cash flow hedges both with and without hedge accounting treatment under IFRS. Those currency cash flow hedges, which do not qualify for hedge accounting are mainly hedging electricity derivatives. Unrealised hedges create volatility in the operating profit.

GROUP TREASURY'S TRANSLATION EXPOSURE

EUR million	2011			2010		
	Investment	Hedge	Open	Investment	Hedge	Open
RUB	2,877	–	2,877	2,774	–	2,774
SEK	948	–	948	543	–112	431
NOK	448	–	448	429	–	429
PLN	121	–	121	121	–	121
Other	101	–	101	220	0	220
Total	4,495	–	4,495	4,087	–112	3,975

Translation exposure position includes net investments in foreign subsidiaries and associated companies. On consolidation, exchange differences arising from the translation of the net investment in foreign entities are taken to equity. The net effect of exchange differences on equity attributable to equity holders from SEK, NOK and RUB was EUR –63 million in 2011 (2010: 299).

INTEREST RATE AND CURRENCY DERIVATIVES BY INSTRUMENT 2011

EUR million	Notional amount				Fair value		
	Remaining lifetimes				Positive	Negative	Net
	Under 1 year	1–5 years	Over 5 years	Total			
Forward foreign exchange contracts	6,115	2,142	–	8,257	38	181	–143
Interest rate swaps	395	2,788	1,554	4,737	253	112	141
Interest rate and currency swaps	20	227	–	247	1	0	1
Forward rate agreements	168	28	–	196	0	0	0
Total	6,698	5,185	1,554	13,437	292	293	–1
Of which long-term					268	164	104
Short-term					24	129	–105

INTEREST RATE AND CURRENCY DERIVATIVES BY USE 2011

EUR million	Notional amount				Fair value		
	Remaining lifetimes				Positive	Negative	Net
	Under 1 year	1–5 years	Over 5 years	Total			
Cash flow hedging foreign exchange derivatives	197	98	–	295	12	3	9
Non-hedging foreign exchange derivatives ¹⁾	5,918	2,044	–	7,962	26	178	–152
Total forward foreign exchange contracts	6,115	2,142	–	8,257	38	181	–143
Fair value hedging interest rate derivatives	–	100	1,250	1,350	162	–	162
Cash flow hedging interest rate derivatives	392	535	304	1,231	0	42	–42
Non-hedging interest rate derivatives ¹⁾	171	2,181	–	2,352	91	70	21
Total interest rate derivatives	563	2,816	1,554	4,933	253	112	141
Non-hedging interest rate and currency swaps ¹⁾	20	227	–	247	1	–	1
Total interest rate and currency swaps	20	227	–	247	1	–	1
Total	6,698	5,185	1,554	13,437	292	293	–1

¹⁾ Consists of deals without hedge accounting status.

INTEREST RATE AND CURRENCY DERIVATIVES BY INSTRUMENT 2010

EUR million	Notional amount				Fair value		
	Remaining lifetimes				Positive	Negative	Net
	Under 1 year	1-5 years	Over 5 years	Total			
Forward foreign exchange contracts	7,375	242	2	7,619	28	361	-333
Interest rate swaps	341	2,203	1,554	4,098	141	45	96
Interest rate and currency swaps	538	-	-	538	15	40	-25
Forward rate agreements	-	167	-	167	0	0	0
Total	8,254	2,612	1,556	12,422	184	446	-262
Of which long-term					145	55	90
Short-term					39	391	-352

INTEREST RATE AND CURRENCY DERIVATIVES BY USE 2010

EUR million	Notional amount				Fair value		
	Remaining lifetimes				Positive	Negative	Net
	Under 1 year	1-5 years	Over 5 years	Total			
Net investment hedging foreign exchange derivatives	195	-	-	195	0	1	-1
Cash flow hedging foreign exchange derivatives	137	98	2	237	9	6	3
Non-hedging foreign exchange derivatives ¹⁾	7,043	144	-	7,187	19	354	-335
Total forward foreign exchange contracts	7,375	242	2	7,619	28	361	-333
Fair value hedging interest rate derivatives	-	25	1,050	1,075	76	0	76
Cash flow hedging interest rate derivatives	-	922	204	1,126	14	8	6
Non-hedging interest rate derivatives ¹⁾	341	1,423	300	2,064	51	37	14
Total interest rate derivatives	341	2,370	1,554	4,265	141	45	96
Non-hedging interest rate and currency swaps ¹⁾	538	-	-	538	15	40	-25
Total interest rate and currency swaps	538	-	-	538	15	40	-25
Total	8,254	2,612	1,556	12,422	184	446	-262

¹⁾ Consists of deals without hedge-accounting status.

3.8 Share derivatives

Cash-settled share forwards are used as a hedging instrument for the Fortum share price risk regarding the Fortum Group's long-term incentive schemes.

The amounts disclosed are non-discounted cash flows for the share derivatives.

The maturity of the share forwards is 1 year.

➔ See Note 31 Employee bonus system, personnel fund and incentive schemes for more information about the Group's long-term incentive schemes on page 85.

EUR million	2011		2010	
	Notional value	Net fair value	Notional value	Net fair value
Share forwards	9	9	19	20

3.9 Credit risk

Fortum is exposed to credit risk whenever there is a contractual obligation with an external counterpart. Fortum has procedures in place to ensure that credit risks are kept at an acceptable level. All larger exposures are monitored centrally against limits which are approved according to authority levels defined in the Corporate Credit Guidelines. Counterparty creditworthiness is continuously monitored and reported.

Credit risk exposures relating to derivative instruments are often volatile due to rapidly changing market prices and are therefore monitored closely. Currency and interest rate derivative counterparts are limited to investment grade banks and financial institutions. ISDA Master agreements, which include netting clauses and in some cases collateral support agreements, are in place with most of these counterparts. The majority of the Group's commodity derivatives are cleared through an exchange such as NASDAQ OMX Commodities Europe (former name Nord Pool), but derivative transactions are also executed on the OTC market directly with external counterparties. These counterparties are limited to those considered of high creditworthiness. Master agreements, such as ISDA, FEMA and EFET, which include netting clauses, are in place with the majority of the counterparties. Furthermore, collaterals are used if dealing with counterparties without approved limits or when exposures arising from engagements are considered too high in relation to the counterparty creditworthiness. Parent company guarantees are requested when dealing with subsidiaries not considered creditworthy on a stand-alone basis.

Fortum, like any capital intensive business, is exposed to credit risks in the financial sector. Credit risk relating to banks is monitored closely as the creditworthiness of financial institutions can deteriorate quickly. Where possible, exposures have been concentrated to key relationship banks considered to be of high credit quality and importance to the financial stability of their respective countries. In Russia, bank guarantees are used to cover exposures to suppliers related to the investment programme of OAO Fortum. In case a contractor defaults or does not fulfil its obligations, there are guarantees covering any prepayments as well as performance guarantees in place. Issuers of these guarantees are banks with a strong local presence and understanding of the contractor. The creditworthiness of these banks as well as exposures arising from issued guarantees is monitored closely.

Credit risk relating to customers is well diversified over a large number of private individuals and businesses across several geographic regions and industry sectors. Russia, Finland and Sweden account for most of the exposure, of which exposure to Russia represents the highest risk of non-payment.

3.9.1 Credit quality of major financial assets

Amounts disclosed below are presented by counterparties for interest-bearing receivables including finance lease receivables, bank deposits and derivative financial instruments recognised as assets.

EUR million	2011		2010	
	Carrying amount	of which past due	Carrying amount	of which past due
Investment grade receivables	953	–	580 ¹⁾	–
Electricity exchanges	249	–	8	–
Associated companies	1,186	–	1,073	–
Other	86	–	210 ¹⁾	–
Total	2,474	–	1,871	–

Investment grade receivables consist of bank deposits EUR 540 million (2010: 336), fair values of interest rate and currency derivatives EUR 292 million (2010: 184) and fair values of electricity, coal, oil and CO₂ emission allowance derivatives EUR 121 million (2010: 60) ¹⁾. Electricity exchange receivable is the fair value of derivatives on NASDAQ OMX Commodities Europe. Associated companies receivables consist of loan receivables EUR 1,186 million (2010: 1,071) and fair values of electricity derivatives EUR 0 million (2010: 2). Other receivables consist of loan and other interest bearing receivables EUR 10 million (2010: 76), finance lease receivables EUR 16 million (2010: 59) and fair values of electricity, coal, oil, and CO₂ emission allowance derivatives EUR 60 million (2010: 75) ¹⁾.

The following tables indicate how bank deposits and fair values of derivatives are distributed by rating class.

¹⁾ CO₂ emission allowance derivatives were not included in financial assets in 2010 Financial statements. In 2011 Financial statements they are included in the analyses of credit quality of financial assets and 2010 figures for investment grade receivables have been adjusted with EUR 5 million, from EUR 575 million to EUR 580 million and other receivables have been adjusted with EUR 2 million, from EUR 208 million to EUR 210 million.

BANK DEPOSITS

EUR million	2011	2010
Counterparties with external credit rating from Standard & Poor's and / or Moody's		
Investment grade ratings		
AAA	–	–
AA+/AA/AA–	93	60
A+/A/A–	296	–
BBB+/BBB/BBB–	151	276
Total investment grade ratings	540	336
Non-investment grade ratings	–	–
Counterparties without external credit rating from Standard & Poor's and / or Moody's	–	–
Total	540	336

In addition to the bank deposits above, cash in bank accounts totalled EUR 207 million on 31 December 2011 (2010: 220).

INTEREST RATE AND CURRENCY DERIVATIVES

EUR million	2011		2010	
	Receivables	Netted amount	Receivables	Netted amount
Counterparties with external credit rating from Standard & Poor's and / or Moody's				
Investment grade ratings				
AAA	–	–	–	–
AA+/AA/AA–	10	0	58	16
A+/A/A–	282	214	126	45
BBB+/BBB/BBB–	–	–	–	–
Total investment grade ratings	292	214	184	61
Counterparties without external credit rating from Standard & Poor's and / or Moody's	–	–	0	0
Total	292	214	184	61

ELECTRICITY, COAL, OIL AND CO₂ EMISSION ALLOWANCE DERIVATIVES

EUR million	2011		2010	
	Receivables	Netted amount	Receivables	Netted amount
Counterparties with external credit rating from Standard & Poor's and / or Moody's				
Investment grade ratings				
AAA	–	–	–	–
AA+/AA/AA–	–	–	0	0
A+/A/A–	121	42	60	11
BBB+/BBB/BBB–	–	–	–	–
Total investment grade ratings	121	42	60	11
Non-investment grade ratings				
BB+/BB/BB–	7	6	2	1
B+/B/B–	–	–	–	–
Below B–	–	–	–	–
Total non-investment grade ratings	7	6	2	1
Total associated companies	0	0	2	0
Counterparties without external credit rating from Standard & Poor's or Moody's				
Government or municipality	4	3	7	2
Fortum Rating 5 – Lowest risk	32	27	46	8
Fortum Rating 4 – Low risk	17	15	18	14
Fortum Rating 3 – Normal risk	0	0	1	0
Fortum Rating 2 – High risk	0	0	–	–
Fortum Rating 1 – Highest risk	–	–	0	0
No rating	0	0	1	1
Total non-rated counterparties	53	45	73	25
Total electricity, coal, oil and CO₂ emission allowance derivatives	181	93	137	37

For derivatives, the receivable is the sum of the positive fair values, i.e the gross amount. Netted amount includes negative fair values where a valid netting agreement is in place with the counterpart. When the netted amount is less than zero, it is not included. In cases where a parent company guarantee is in place, the exposure is shown on the issuer of the guarantee.

All counterparties for currency and interest rate derivatives and the majority of counterparts for bank deposits have an external rating from Standard & Poor's and Moody's credit agencies. The above rating scale is for Standard & Poor's rating categories. For those counterparts only rated by Moody's, the rating has been translated to the equivalent Standard and Poor's rating category.

In the electricity, coal and oil derivatives market, there are a number of counterparts not rated by Standard & Poor's or Moody's. For these counterparts, Fortum assigns an internal rating. The internal rating is based on external credit ratings from other credit agencies. The risk class from Asiakastieto is used for Finnish counterparties, the rating from Creditinform is used for Norwegian counterparties, the risk indicator from UC (Upplysningscentralen) is used for Swedish counterparties and for other counterparties the rating from Dun & Bradstreet is used. Governments and municipal companies are typically not rated, and are shown separately. This rating category does not include companies owned by governments or municipalities. Counterparts that have not been assigned a rating by the above listed credit agencies are in the "No rating" category.

4 CAPITAL RISK MANAGEMENT

Fortum wants to have a prudent and efficient capital structure which at the same time allows the implementation of its strategy. Maintaining a strong balance sheet and the flexibility of the capital structure is a priority. The Group monitors the capital structure based on Comparable net debt to EBITDA ratio. Net debt is calculated as interest-bearing liabilities less liquid funds. EBITDA is calculated by adding back depreciation, amortisation and impairment charges to operating profit, whereas Comparable EBITDA is calculated by deducting items affecting comparability and net release of CSA provision from EBITDA. In September 2010 with launching the revised strategy Fortum adjusted its net debt to EBITDA target to be around 3. The earlier target was a range of 3.0–3.5.

Capital expenditure, acquisitions, dividend distributions, repurchases of own shares and capital returns to shareholders are ways to move towards the target capital structure. Fortum's dividend policy states that the company aims to pay a dividend which corresponds to an average payout ratio of 50 to 60%.

In December 2011, Standard and Poor's revised its outlook rating for Fortum's Corporation from (stable) to (negative), but at the same time affirmed the (A) long-term rating. Fortum Corporation's long-term credit rating from Moody's, A2 (stable), remained unchanged.

NET DEBT / EBITDA RATIOS

EUR million	Note	2011	2010
Interest-bearing liabilities	33	7,770	7,382
Less: Liquid funds ¹⁾	29	747	556
Net debt		7,023	6,826
Operating profit		2,402	1,708
Add: Depreciation, amortisation and impairment charges		606	563
EBITDA		3,008	2,271
Less: Items affecting comparability		600	-125
Less: Net release of CSA provision		34	-
Comparable EBITDA		2,374	2,396
Net debt / EBITDA		2.3	3.0
Comparable net debt / EBITDA		3.0	2.8

¹⁾ Including cash balances of EUR 16 million (2010: 0) classified as assets held for sale in balance sheet.

5 SEGMENT REPORTING

5.1 Fortum's business structure

Fortum's business operations are organised in four divisions and four corporate staff functions. The business divisions are Power, Heat, Russia and Electricity Solutions and Distribution. The Electricity Solutions and Distribution (ESD) division consists of business areas Distribution and Electricity Sales. The staff functions are Finance, Corporate Relations and Sustainability, Corporate Human Resources and Corporate Strategy and R&D. Fortum also has a Trading and Industrial Intelligence (TII) unit that manages hedging activities and fuel purchasing activities on behalf of Power, Heat, ESD divisions and provides market analysis to support decision making in Fortum. The shared service centers, as parts of the staff functions, charge the companies according to service level agreements.

5.2 Segment structure in Fortum

The business divisions (Power, Heat and Russia) and the business areas of ESD division (Distribution and Electricity Sales) are Fortum's reportable segments under IFRS.

Below is the description of the reportable segments:

Power consists of Fortum's power generation, physical operation and trading as well as expert services for power producers in the Nordic market and selected international markets. Power sells its power mainly to the Nordic power exchange Nord Pool Spot.