Risk management

Enterprise risk management as a fully integrated risk management process was systematically applied in 2015 at all levels of the Corporation. The three divisions, the Corporate Staff and all significant Corporate Companies prepared a risk map in May and November of the key risks with regard to strategy, markets, operations, management and resources, financials as well as sustainability. The likelihood of the risk occurring was classified into four categories. Where possible and appropriate, the identified risks were subject to a quantifiable assessment, taking into consideration any measures that had already been implemented. Alternatively, a qualitative assessment of the risk exposure was applied.

The Risk Council, consisting of representatives of the divisions and the Corporate Staff and headed by the Chief Risk Officer, held two meetings. The topics of these meetings were the optimization of the semi-annual risk reporting with more focus on the implementation of measures; business continuity management; coordination of all activities in the area of enterprise risk management; and the analysis of the risk maps.

In accordance with the semi-annual risk reporting process, the Executive Committee and the management of the divisions discussed the risk maps twice during the year under review. They defined at the appropriate level the key risks of the Corporation, the divisions and the Corporate Companies, and determined adequate measures to mitigate those risks. The Board of Directors tabled the topic of enterprise risk management in December 2015 to analyze the corporate and divisional risk maps as well as define the key risks and the risk mitigation measures.

The multi-stage procedure, including workshops at division management, Executive Committee and Board of Directors level, has proven to be very effective, as has having Internal Auditing assess the risk maps prepared by the Corporate Companies.

The key risks were identified as a slowdown of economic growth in China, the cyclicality of certain business units of the divisions, the quality and competitiveness of the products, and foreign currency developments.

Measures to reduce these and other risks were defined and are being implemented in line with the strategic targets of the Corporation and the three divisions.

Financial risk management

The Board of Directors bears ultimate responsibility for financial risk management. The Board of Directors has tasked the Audit Committee with monitoring the development and implementation of the risk management principles. The Audit Committee reports regularly to the Board of Directors on this matter.

The risk management principles are geared to identifying and analyzing the risks to which the Corporation is exposed and to establishing the appropriate control mechanisms. The principles of risk management and the processes applied are regularly reviewed, taking due regard of changes in the market and in the Corporation's activities. The ultimate goal is to develop controls, based on the existing training and management guidelines and processes, that ensure a disciplined and conscious approach to risks. The Audit Committee is supported by the Head of Finance & Controlling in this task.

Owing to its business activities, GF is exposed to various financial risks such as credit risk, market risk (including currency risk, interest rate risk, and price risk), and liquidity risk. The following sections provide an overview of the extent of the individual risks as well as the goals, principles, and processes employed for measuring, monitoring, and hedging the financial risks.

Credit risk // The credit risk is the risk of suffering financial loss if a customer or counterparty of a financial instrument fails to meet its contractual obligations. At GF, the main credit risks arise from trade accounts receivable and bank deposits.

GF invests its cash worldwide and predominantly as deposits in leading Swiss and German banks with at least a BBB– rating. In accordance with the investment policy of GF, these transactions are entered into only with creditworthy commercial institutions. Generally, the investments have a maturity of less than three months. In addition, Corporate Companies have current bank accounts. Cash is allocated to several banks to limit counterparty risk.

Transactions involving derivative financial instruments are also entered into only with major counterparties with at least a BBB– rating. The purpose of such transactions is to hedge against currency risks and price fluctuations for the purchase of raw materials and electric power for the Corporation.

The danger of cluster risks on trade accounts receivable is limited due to the large number and wide geographic spread of customers. The extent of the credit risk is determined mainly by the individual characteristics of each customer. Assessment of this risk involves a review of a customer's creditworthiness based on its financial situation and past experience. In monitoring default risk, customers are classified according to relevant factors, such as geographic location, sector, and past financial difficulties.

The maximum credit risk on financial instruments corresponds to the carrying amounts of the relevant financial assets. GF has not entered into appreciable guarantees or similar obligations that would increase the risk over and above the carrying amounts. The maximum credit risk as of the balance sheet date was as follows:

CHF million	**2015**	2014
Cash and cash equivalents	549	374
Other accounts receivable[1]	24	27
Accrued income	19	15
Trade accounts receivable	640	643
Derivative financial instruments	5	2
Other financial assets[2]	11	19
Total	**1 248**	1 080

1 Without tax credits.
2 Relates to loans to third parties, security deposit and long-term invested securities for the settlement of pension liabilities.

Market risk // Market risk is the risk that changes in market rates and prices, e.g. exchange rates, interest rates, or share prices, may have an impact on the profit and market value of financial instruments held by GF. The aim of managing such market risks is to monitor and control these risks in order to ensure that they do not exceed a defined limit.

Currency risk // Owing to its international activities, GF is exposed to currency risks. These financial risks occur in connection with transactions (in particular the purchase and sale of goods) which are effected in currencies different from the functional currency of the company in question. Such transactions are effected mainly in Swiss francs, euros and US dollars. Currency risks can be reduced by purchasing and producing goods in the functional currency ("congruency" rule). In some cases, US dollars or euros are hedged, generally for a maximum of twelve months, by means of forward exchange contracts.

The fair value hedges include foreign exchange contracts that serve to hedge loans to Corporate Companies in foreign currencies. Unrealized gains and losses from changes to the fair value are reported for these contracts in the financial result. The fair value hedges also include foreign exchange contracts that serve to hedge currency risks on receivables and liabilities. Like the currency effects on the underlying balance sheet item, gains and losses from changes to the fair value of these contracts are recognized in "Other operating income".

The cash flow hedges mainly serve to hedge currency risks on future sales in foreign currencies. The volume of the foreign exchange contracts is limited to a maximum 75% of the expected sales. This results in a fully effective hedge. In individual cases, the cash flows from orders are fully hedged. Unrealized gains and losses from changes to the fair value are recognized directly in equity. They are transferred to the income statement when the service is performed and invoiced; as a result, the foreign exchange contracts become fair value hedges. To a lesser extent, currency risks with respect to future inventory purchases were also hedged during the reporting period.

The table below shows the contract values and market values of the foreign exchange contracts (net) as of the balance sheet date:

Foreign exchange contracts, net

CHF million	Fair value hedges	Cash flow hedges	2015	2014
Contract value	107	233	340	348
Replacement value[1]		–1	–1	10
Market value	107	232	**339**	358

1 Corresponds to the carrying amount recognized as marketable securities or other liabilities.

The fair value hedges cover not only US dollar contracts but also contracts for the euro, the Japanese yen and the other currencies. All open foreign exchange contracts fall due and have an effect on liquidity and the income statement within twelve months of the balance sheet date. Assuming unchanged exchange rates, a cash outflow of CHF 339 million (gross) would be offset by a cash inflow of CHF 340 million (gross), giving a positive replacement value of CHF 1 million. Cash flow hedges account for cash outflows of CHF 232 million and cash inflows of CHF 233 million.

Contract values, net by currencies

CHF million	2015	2014
USD/CHF	287	314
EUR/CHF	19	
TRY/USD	10	6
TRY/EUR		9
JPY/CHF	4	4
SGD/CHF	7	8
SEK/CHF	5	
Other	8	7
Total	**340**	348

Interest rate risk // The interest rate risk may involve either changes in future interest payments owing to fluctuations in market interest rates or the risk of a change in market value, i.e. the risk that the market value of a financial instrument will change owing to fluctuations in market interest rates.

Market value sensitivity analysis for interest-bearing financial instruments with a fixed interest rate: Market value fluctuations of fixed-interest financial instruments are not recognized in the Corporation's income statement. Therefore, a change in interest rates would not have any effect on the income statement. Hedge accounting was not applied for interest rate hedging.

Cash flow sensitivity analysis for financial instruments with variable interest rates: A one-percentage-point increase in interest rates would have increased net income by CHF 4.0 million (previous year: CHF 2.3 million). A reduction in the interest rate by the same percentage would have reduced net income by the same amount. The underlying assumption for this analysis is that all other variables remain unchanged.

Price risk // The securities held for trading of CHF 5 million are exposed to price risks (on the stock market). Since the value of the securities held for trading is modest, there is no great sensitivity to changes in share prices. The securities held are mainly shares of Swiss blue chip companies.

Liquidity risk // The liquidity risk is the risk that GF is unable to meet its obligations when they fall due.

Liquidity is constantly monitored to ensure that it is adequate. Liquidity reserves are held in order to offset the usual fluctuations in requirements. At the same time, the Corporation has unused credit lines in case more serious fluctuations occur. The total amount of unused credit lines as of 31 December 2015 was CHF 595 million. The credit lines are spread over several banks so that there is no excessive dependence on any one institution.

The following tables show the contractual maturities (including interest rates) of the financial liabilities held by GF at the end of the reporting period and in the previous year:

CHF million	Carrying amount	Contractual cash flows	Up to 6 months	6 to12 months	1 to 5 years	More than 5 years
2015						
Trade accounts payable	420	420	420			
Other liabilities current/non-current[1]	126	126	76	4	46	
Accrued liabilities and deferred income	198	198	198			
Bonds	499	541	207	6	170	158
Other financial liabilities	271	304	147	25	95	37
Total	**1 514**	**1 589**	**1 048**	**35**	**311**	**195**

CHF million	Carrying amount	Contractual cash flows	Up to 6 months	6 to12 months	1 to 5 years	More than 5 years
2014						
Trade accounts payable	419	419	419			
Other liabilities current/non-current[1]	120	120	59	10	50	1
Accrued liabilities and deferred income	181	181	181			
Bonds	497	553	7	6	379	161
Other financial liabilities	210	230	130	36	61	3
Total	1 427	1 503	796	52	490	165

1 For more details, see note 15.