MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

As of September 1, 2013 CeramTec Holding GmbH obtained control of the advanced ceramics business consisting of CeramTec GmbH and its subsidiaries, CeramTec North America Corporation, PST Press + Sintertechnik Sp.z o.o. and Press and Sinter Technics de Mexico, S.A. de C.V. Accordingly, the consolidated financial statements as of December 31, 2013 do not include the advanced ceramics business until August 31, 2013. The audited consolidated financial statements of CeramTec Holding Group as of December 31, 2013 contain additional disclosures to explain the effects of the business combination on the financial condition and the results of operations of the group. As a result the comparability and the significance of the financial data presented are limited.

The purpose of this MD&A is to show the development of the financial results of the operating business for the twelve month period ended December 31, 2014 in comparison to the twelve month period ended December 31, 2013. It must be noted that the financial statements shown in this document are shown on a historical basis, rather than on a Pro Forma basis. This means that, among other things, the financial statements for 2013 include effects from the increased level of indebtedness as well as from the purchase price accounting.

The historical financial data as of and for the twelve month periods ending December 31, 2013 and 2014 has been derived from the audited combined financial statements of the advanced ceramics business (as of August 31, 2013) as well as consolidated financial statements of CeramTec Holding GmbH (as of December 31, 2013) and the consolidated financial statement of CeramTec Holding GmbH (as of December 31, 2014).

The following discussion should be read in conjunction with the information contained in our audited consolidated financial statements for the period July 15 to December 31, 2013 and the Pro Forma consolidated financial information for the period January 1 to December 31, 2013 including the footnotes separately provided to you.

Due to rounding differences, figures in tables and cross-references may differ slightly from the actual figures (units of currency, percentages, etc.).

Overview

We are a leading global developer, manufacturer and supplier of high performance ceramics ("HPC"). Our products are made of advanced ceramics which are highly specialized materials with superior biological, mechanical, electrical, thermal or chemical properties compared to competing products made from metal or polymers (plastics). We have been engaged in the HPC industry for over 100 years, with operational expertise and experience in creating innovative system solutions for longstanding customers. We currently offer a wide range of HPC products from hip joint prostheses components to actuators in valves for diesel and gasoline injection systems. The versatility of HPC products and resulting wide-range of applications provides us with a highly diversified end market and customer base.

Our operations can be divided into two business groups - Medical Applications and Industrial Applications.

Our core Medical Applications business accounted for 37.4% of Group net sales but contributed the majority of our EBITDA in 2014. Medical Applications benefit from relatively high margins and modest capital expenditure requirements compared to Industrial Applications, and are the major contributor to group cash flows, supplemented by Industrial Applications.

In 2014, we generated 70.9% of our net sales in Europe (including Germany). However, our customers have a strong export focus as their end-products, such as hip joint prostheses, are exported world-wide. In addition, we have a global infrastructure with manufacturing facilities in Europe, North

America, Asia and South America with over 3,261 employees worldwide as of December 31, 2014. We believe that we are a global company with a global sales footprint.

In 2014 we generated net sales of €474.8 million and Adjusted EBITDA of €154.1 million representing a 32.4% Adjusted EBITDA margin. During the 2013 to 2014 period, our net sales and Adjusted EBITDA registered compound annual growth rates (CAGR) of 8.3% and 9.9% respectively and our cash conversion ratio increased from 56% to 67%. We believe that we have a highly cash generative business supported by modest maintenance capital expenditure requirements of approximately €15 million annually.

Economic, Industry and Other Developments in our Key Geographical Target Markets

Our sales to our customers are mostly concentrated in Europe and specifically in Germany. However, although our customers are concentrated in Europe, many of them, especially medical and automotive customers, are export oriented. As a result, while we currently generate approximately 71% of our net sales based on sales to our direct customers in Europe, we are globally more diversified due to the export focus of many of our European customers. The following table provides an overview of our net sales by geography (by invoicing address, means Europe is overstated while other regions, mainly North America, are understates driven by sales to top customers located in Europe and distributing worldwide) in the last two years as a percentage of total net sales in the given period:

	Year Ended December 31,	
	2014	2013
	(%)	
Europe (including Germany)	70.9	75.3
Thereof Germany	28.3	30.5
North America	14.5	11.0
Asia	11.7	11.0
Other regions	2.9	2.7

While our Medical Applications is not particularly affected by macroeconomic developments, our net sales in Industrial Applications is influenced by economic growth in our target markets, particularly in Europe. However, due to the large number of niche markets in which we operate, the effect of economic downturns has in the past been partially offset by the various different developments in our industrial target markets. Additionally, while 62.6% of our total net sales were attributable to our Industrial Applications in 2014, our Medical Applications generated the majority of our Adjusted EBITDA in 2014.

By net sales, the automotive market was the largest single end market for our Industrial Applications, followed by the electronics market, textile, construction and various other industrial niche markets. Particularly for the automotive end market, but also various other industrial end markets such as construction, the economic developments in Germany and Europe have a significant effect on our net sales.

In the past year, Germany has registered a GDP growth of 1.4%. For 2015 the Institut für Weltwirtschaft and the Leibniz-Institut für Wirtschaftsforschung expect an increase of the German GDP of 1.7%. The institutes projected global growth of 3.4% in 2014 which is expected to accelerate to 3.7% in 2015. The United States is projected to grow by 2.2% in 2014 and 3.2% in 2015, while in Eurozone's GDP is lower than in other industrial countries in 2014, but shall rebound in 2015 to 1.2% GDP growth.

Next to the overall GDP growth rate influencing the results of the operations of our Industrial Applications, each of our industrial markets is also influenced by separate and distinct factors and has a different economic cycle.

We are among the market leaders in many of the industrial niche markets that we target. Most of our main HPC competitors have either a different target market or geographical focus. Additionally, due to the large variety of our products, we are the sole supplier of certain specialized products in certain niche areas. However, specifically in the automotive end market and the electronics end market we have faced pressure from competitors in certain niche markets.

Acquisition of the advanced ceramics business including the increase of indebtedness

CeramTec Service GmbH acquired with effectiveness August 31, 2013 / September 1, 2013, 24:00 h CEST 100% of the shares of CeramTec GmbH, Press and Sinter Technics de Mexico, S.A. de C.V., CeramTec North America Corporation as well as PST Press + Sintertechnik Sp.z.o.o. and obtained control over these entities. The acquisition took place to accelerate CeramTec's growth targets, esp. outside the core European markets, supporting the launch of new product initiatives and investing in the expansion of production facilities to support further growth in the hip implants market.

The acquisition was financed by equity contributions and the granting of a shareholder loan of €120 million on August 29, 2013 of the shareholder of CeramTec Holding, Faenza Luxembourg, as well as the issuance of an unsecured bond (€307 million) and senior secured credit facilities (€647 million credit facilities used and revolving credit facilities of an additional EUR €100 million committed but not drawn).

The consideration transferred to obtain control amounts to €1,547 million. It includes the purchase price for the acquisition of the shares (€1,528 million) and the purchase price for the acquisition of loan receivables against the Advanced Ceramics Business (€19 million). The fair value of the assets acquired and the liabilities assumed amounts to €997 million. Taking into account the consideration transferred, the goodwill resulting from the acquisition of the Advanced Ceramics Business amounts to €550 million.

Initial recognition of the business combination was determined provisionally in the consolidated financial statements as December 31, 2013. The fair values determined for the Purchase Price Allocation as of September 1, 2013 have been changed during the measurement period. Therefore the figures of the comparative period shown in the Interim Consolidated Statement of Financial Position have been adjusted accordingly.

The following table shows the adjustments made for the comparative period:

	31 December 2013		
	Reported figures € million	Adjustment € million	Adjusted figures € million
Assets			
Goodwill	548.9	-1.4	547.4
Deferred taxes	2.4	-0.2	2.2
Liabilities			
Provisions for pension obligations	62.2	-1.1	61.1
Other provisions (non-current)	4.3	-0.8	3.5
Deferred taxes	190.6	0.2	190.8

Until December 31, 2013 additional expenses for the amortization and depreciation of the fair value adjustments of €18.4 million were recognized in the costs of products sold and €7.9 million were recognized in the selling costs, which represents only the additional expenses resulting from the acquisition of the advanced ceramics business and which exceed the amortization and depreciation expenses, which were already recorded until August 31, 2013 from the acquisition of the advanced ceramics business by Rockwood in 2004 and which would have been recorded until December 31, 2013, would the transaction not have been executed.

Deferred taxes are calculated on the basis of the applicable local tax rates ranging from 15% to 34%.

The goodwill recognized mainly comprises future profits, which are expected to be realized within the next years and which cannot be recognized as separate assets. Total consideration transferred consists only of cash. No other class of consideration was transferred to obtain control.

The acquisition related costs amount to €17.8 million. The line item of the income statement is other income and other expense, in which the acquisition related costs were recognized.

The goodwill which is deductible for tax purposes amount to €75.0 million as of the acquisition date. A deferred tax asset of €20.1 million was recognized.

Results of Operations

The following discussion should be read in conjunction with the information contained in our audited consolidated financial statements for the period July 15 to December 31, 2013 and the Pro Forma consolidated financial information for the period January 1 to December 31, 2013 including the footnotes separately provided to you last year.

With effectiveness of September 1, 2013 CeramTec Service GmbH acquired the advanced ceramics business from Rockwood. Prior to this acquisition we have already prepared and published an analysis of our results of operations for Q2/2013, Q1/2013 as well as for 2012. We also presented an analysis of Q3/2013, which comprises two months prior to the acquisition and one month after the acquisition. The figures presented there were (for Q3/2013 partly) based on accounting principles as set by Rockwood and which were in accordance with IFRS as adopted in the EU.

As already communicated CeramTec Holding GmbH modified these presentations of certain items of income and expenses in order to increase the comparability and consistency from the acquisition onwards.

The following table shows our income statement for the period 2014 compared to 2013

	Year Ended December 31		
	2014	**2013**	**Change**
	(in € million)		**(%)**
Net sales	474.8	438.0	8.4
Costs of products sold	293.5	289.4	1.4
Thereof Amortization	14.7	20.7	-29.0
Thereof Depreciation	40.8	31.0	31.6
Thereof reversal step up inventories	0.0	16.8	>100.0
Gross profit on sales	**181.3**	**148.6**	**22.0**
Selling costs	78.9	59.0	33.7
Research and Development Costs	24.1	20.2	19.3
General administration costs	18.9	21.9	-13.7
Other income	4.5	0.5	>100.0
Other expenses	2.5	31.3	>-100.0
Profit from operations	**61.5**	**16.7**	**>100.0**
Financial income	0.2	9.2	>-100.0
Financial expenses	94.1	40.6	>100.0
Financial result	(93.9)	(31.4)	>100.0
Earnings before taxes	**(32.4)**	**(14.7)**	>100.0
Taxes on income	(1.0)	7.5	>-100.0
Net income / (loss)	**(31.4)**	**(22.2)**	**(41.4)**

Net Sales

The following table provides an overview over our sales in 2014 compared to 2013 on a business unit level:

	Year Ended December 31		
	2014	2013	Change
	(in € million)		(%)
Medical Applications(1)	**177.6**	**162.5**	**9.3**
Industrial Applications(1)	**297.2**	**275.5**	**7.9**
Thereof Multifunctional Ceramics	47.2	44.0	7.3
Thereof Electronic Applications	46.9	43.5	8.0
Thereof Cutting Tools	38.8	34.9	11.1
Thereof Mechanical Systems	36.0	36.6	-1.6
Thereof Mechanical Applications	23.3	21.9	6.4
Thereof Other Applications	150.5	135.2	11.3
Consolidation(2)	(45.5)	(40.6)	12.1
Total net sales	**474.8**	**438.0**	**8.3**

(1) The numbers presented for Medical Applications and Industrial Applications are external net sales to third parties.

(2) The sales presented for the business units of Industrial Applications include internal sales to Group companies. The line item "Consolidation" represents all internal sales between business units which are listed under Industrial Applications. We believe that sales including internal sales for our business units in Industrial Applications provide a better description of trends in these business units due to substantial internal sales between our business units in Industrial Applications.

Our net sales increased by 8.3% from €438.0 million in 2013 to €474.8 million in 2014, principally due to growth in our Medical Applications.

Our net sales in Medical Applications increased by 9.3% from €162.5 million in 2013 to €177.6 million in 2014. The increase was due to our strong market position in the growing total hip replacement market and increased market share of ceramic ball heads and cup inserts.

This positive development was supported by an increase in net sales by 7.9% in Industrial Applications from €275.5 million to €297.2 million. The gain in net sales in Industrial Applications was driven by favorable developments in almost every business unit except mainly at CeramTec-ETEC GmbH due to lower demand in ballistic products.

The following table shows a break-down of our net sales which we generated in the different geographical areas:

	Year Ended December 31		
	2014	2013	Change
	(in € million)		(%)
Europe (excluding Germany)	202.4	196.4	3.1
Germany	134.5	133.8	0.5
North America	68.8	48.3	42.4
Asia	55.8	48.0	16.3
Other regions	13.4	11.5	16.5
Total net sales	**474.8**	**438.0**	**8.3**

In Germany net sales are nearly unchanged while net sales in the rest of Europe increased slightly by 3.1%, particularly due to sales to our top Medical Applications customers located in other countries in Europe. Similarly, sales in North America rose from €48.3 million to €68.8 million mainly contributed by catalyst carrier sales of CeramTec North America.

Costs of Products Sold and Gross Profit on Sales

The following table shows a break-down of our costs of products sold for 2013 and 2014:

	Year Ended December 31			
	2014		2013	
	(in € million)	(% of net sales)	(in € million)	(% of net sales)
Costs of materials and packaging	88,7	18,7	84.7	19.3
Energy	16.6	3.5	16.5	3.8
Personnel expenses	101.3	21.3	99.4	22.7
Amortization expenses	14.7	3.1	20.7	4.7
Depreciation expenses	40.8	8.6	31.0	7.1
Maintenance expenses of factory building and equipment	8.0	1.7	9.3	2.1
Other costs	23.4	4.9	27.8	6.3
Costs of products sold	**293.5**	**61.8**	**289.4**	**66.0**

Costs of products sold increased in total from €289.4 million or 66.0% of net sales in 2013 to €293.5 million or 61.8% of net sales in 2014. And as a result, our gross profit margin increased from 34.0% to 38.2%. Excluding Amortization and Depreciation expenses, our Cost of products sold increased very marginally from €237.7 million or 54.3% of net sales in 2013 to €238.0 million or 50.1% of net sales in 2014. Our personnel expenses relating to costs of products sold increased from €99.4 million in 2013 to €101.3 million in 2014 mainly due to annual wage increases and an incremental headcount of 67 FTE. Furthermore costs of materials and packaging increased from €84.7 million to €88.7 million due to higher sales volume but decreased in % of sales due to a positive material mix. The cost increases were offset by efficiency gains and lower scrap in production. Finally, maintenance expenses as well as other costs decreased because of lower repairs in buildings and facilities.

Selling Costs

Selling costs increased by 33.7% from €59.0 million or 13.5% of net sales in 2013 to €78.9 million or 16.6% of net sales in 2014. Excluding Amortization and Depreciation expenses, Selling costs increased from €45.3 million or 10.3% of net sales in 2013 to €49.7 million or 10.5% of net sales in 2014 due to increased sales activity to accelerate growth as well as consulting expenses. The increase in Amortisation and Depreciation expenses of €15.5 million was due to the full year effect of the new group structure.

Research and Development costs

Research and development costs increased by 19.3% from €20.2 million or 4.6% of net sales in 2013 to €24.1 million or 5.1% of net sales in 2014. The increase was primarily due to an increased headcount in the development division to realize planned growth projects and due to higher development cost at CeramTec-ETEC for Transparent Ceramics. .

General Administration Costs

General administration costs decreased by 13.7% from €21.9 million or 5.0% of net sales in 2013 to €18.9 million or 4.0% of net sales in 2014. The decrease was mainly due to the shortfall of share-based remuneration expenses of €3.2 million resulting from the Rockwood scheme, which ended on August 31, 2013 as well as pension costs of €1.0 million. The decrease was partly offset by expenses for the management change in 2014.

Other Income

Other income increased from €0.5 million in 2013 to €4.5 in 2014 mainly due to operating gain on foreign exchange of €1.8 million and the release of solvability provision of €1.8 million.

Other Expenses

Other expenses decreased from €31.3 million in 2013 to €2.5 million in 2014. The main reason for the decrease were the shortfall of transaction related costs in the amount of €17.8 million incurred for the acquisition of the advanced ceramics business as well as other non-recurring costs amounting to €8.0 million in connection with preparatory measures in order to realize the sale of the advanced ceramics business from Rockwood to CeramTec Holding GmbH (mainly additional bonus expenses of €5.5 million, auditing costs of €1.1 million and other expenses of €1.4 million).

Financial Income

Financial income decreased from €9.2 million in 2013 to €0.2 million in 2014, the main effect in 2013 resulted from the fair value measurement of the prepayment option.

Financial Expenses

Financial expenses increased from €40.6 million in 2013 to €94.1 million in 2014, in particular due to the increased indebtedness resulting from the financing of the acquisition of the advanced ceramics business during 2013, the currency translation of the USD loans under the Term Loan Facilities and the fair value measurement of the interest cap and the embedded interest floor.

Taxes on Income

Taxes on income decreased from €7.5 million expense in 2013 to €1.0 million income in 2014. This was primarily caused by the effects of the decreasing deferred tax liabilities relating to the fair value adjustments resulting from the acquisition of the advanced ceramics business.

The following table provides an overview over the split in earnings before taxes as they relate to Germany and other countries:

	Year Ended December 31	
	2014	2013
	(in € million)	
Germany	(36.1)	(16.9)
Abroad	3.7	2.2
Total earnings before taxes	**(32,4)**	**(14.7)**

The effective tax rate includes the current and also the deferred tax expenses and takes into account all impacts, e.g. through non-deductible operating expenses or an amended tax assessment basis. The following table shows the reconciliation of the expected to the effective tax rate (i.e. tax expense in relation to the earnings before taxes):

	Year Ended December 31,			
	2014		2013	
	(in € million)	(%)	(in € million)	(%)
Earnings before income taxes	**(32.4)**	**100.0**	**(14.7)**	**100.0**
Expected tax expense (income)	(9.2)	28.5	(4.2)	28.5
Permanent differences	2.0	(6.2)	3.6	(24.5)
Changes in the tax rate	0.0	0.0	1.4	(9.5)
Effects resulting from interest carry forwards	7.0	(21.5)	5.7	(38.8)
Corrections in the prior years	(0.4)	1.3	0.0	0.0
Other adjustments	(0.4)	1.1	1.0	(6.8)
Tax expense and effective tax rate	**(1.0)**	**3.2**	**7.5**	**(51.1)**

Net income

Taken into account the effects mentioned above, which relate particularly to the acquisition of the advanced ceramics business, our net income declined from €-22.2 million in 2013 to €-31.4 million in 2014.

EBITDA and Adjusted EBITDA

As our income statement analyzed above was mainly negatively impacted by the accounting effects of the business combination, the following table shows the development of our operating business expressed by the EBITDA, which is adjusted by all of the non-operating effects incurred in 2014 as well as 2013, which was adjusted due to the alignment of the presentation format, which is discussed in further detail on page 5:

	Year Ended December 31, 2014	2013
	(in € million)	
Net income (Net loss)	(31.4)	(22.2)
Taxes on income	(1.0)	7.5
Financial result	93.9	31.4
Amortization	44.4	34.8
Depreciation	44.4	34.1
Impairment charge	0.4	
EBITDA	**150.8**	**85.6**
Rockwood management fee [(1)]		3.3
Restructuring costs [(2)]	4.6	0.6
Adjustment for rebate to a customer [(3)]		0.5
Share-based remuneration [(4)]		4.0
Non-recurring items [(5)]		31.4
Release of inventory fair value step-up [(6)]		16.8
Estimated standalone costs [(7)]		(3.8)
Estimated standalone costs booked [(8)]		1.8
Other one-off costs [(9)]	(-1.3)	
Adjusted EBITDA	**154.1**	**140.1**
Adjusted EBITDA Margin (%)	*32.4*	*32.0*

Our Adjusted EBITDA increased by 9.9% from €140.1 million to €154.1 million. The increase in our Adjusted EBITDA was mainly driven by a positive gross margin effect in our Medical Applications.

(1) The Rockwood management fee relates to payments made to Rockwood for providing certain group functions and services to the Group, mainly insurance coverage, treasury and tax support until the acquisition by CeramTec Holding. Since September 1, 2013 no additional management fees were paid to Rockwood. Instead, it is expected to incur standalone costs in connection with building up group functions and services provided to us by Rockwood, most notably insurance coverage, audit fees, headcount costs, treasury, tax and accounting support, investor relation. See footnote (7) below.

(2) Restructuring costs refers to headcount reductions and severance payments.

(3) The adjustment for a rebate paid to a customer refers to price calculation adjustments in 2011, 2012 and the first quarter of 2013 and a subsequent refund to this customer in the first quarter of 2013.

(4) Share-based remuneration relates to costs in connection with the Rockwood share-based payment plan until August 31, 2013.

(5) Non-recurring items mainly include acquisition related costs to acquire the advanced ceramics business incurred by the acquirer as well as transaction related costs incurred by CeramTec GmbH (€25.9 million). Furthermore the non-recurring items include increased one-off costs due to pension plan amendments and funding obligations to pension schemes (Pension Adjustment / Solvability €6.6 million). In addition this line item comprises a valuation allowance on a trade receivable sundry non-recurring items especially gains and losses on asset disposals.

(6) Release of inventory fair value step-up relates to the fair value measurement of inventories acquired within the business combination, which were expensed with the same amount in the costs of products sold from September until December 2013 due to the consumption of the respective inventory items. In total this is a non-cash transaction.

(7) Estimated standalone costs are management's estimates for total recurring costs to be incurred in connection with the acquisition of Rockwoods advanced ceramics business for group functions and services previously provided to us by Rockwood, mainly insurance coverage, audit fees, headcount costs, treasury, tax and accounting support, investor relation which are not included in the EBITDA as these costs have not yet been incurred.

(8) Includes the standalone costs recognized as an expense in 2013, which have initially decreased the unadjusted EBITDA. As the estimated standalone costs are adjusted in total, a correction for the already recognized standalone costs is necessary.

(9) Includes mainly consulting expenses for a potential acquisition and the release of a pension related provision for solvability,

Liquidity and Capital Resources

Our primary cash needs will be related to debt service requirements, working capital requirements, capital expenditures, tax payments and restructuring costs, which we expect to be funded by cash flows from operations.

Our primary source of liquidity will continue to be cash flows from operations and our cash balance of €62.2 million as of December 31 2014. In addition, there are funds available under our committed but undrawn €100 million Revolving Credit Facility.

The following table shows cash flows from operating, investing and financing activities for the periods 2013 and 2014:

	2014	2013
	(in € million)	
Net loss	(31.4)	(22.2)
Taxes on income	(1.0)	7.5
Interest result	79.1	37.9
Earnings before interest and taxes	46.7	23.2
Income taxes paid (-) / income taxes received	(16.4)	(1.3)
Depreciation and amortization on non-current assets	89.2	68.9
Losses from disposal of non-current assets	0.0	0.3
Increase/decrease (-) in provisions	3.2	(2.5)
Other non-cash items	17.7	12.8
Change in trade working capital	(10.4)	3.8
Cash flows from operating activities	**130.0**	**105.2**
Cash inflow from disposal of property, plant and equipment	1.3	0.2
Cash outflow for capital investments in property, plant and equipment	(47.7)	(54.0)
Cash outflow for capital investments in other intangibles assets	(1.4)	(2.5)
Cash inflow from grants for investments in property, plant and equipment and other intangibles assets	6.1	1.0
Acquisition of businesses [(1)]	(3.5)	(1,543.5)
Cash flows from investing activities	**(45.3)**	**(1,598.8)**
Proceeds from / repayment (-) of loans to affiliated companies	0.0	(15.3)
Cash inflow / outflow (-) from current accounts with affiliated companies	0.0	167.1
Proceeds from / repayment (-) of borrowings	(7.5)	(7.9)
Cash outflow to the previous shareholder	(26.9)	(0.0)
Cash inflow from capital contribution from shareholders	0.0	378.8
Cash outflow from the repurchase of instruments within the scope of the share-based payment program	0.0	(1.8)
Cash outflow from the repurchase of instruments within the scope of the share-based payment program, in excess of capital contribution	0.0	(2.3)
Cash inflow from issue of bonds	0.0	299.8
Proceeds from borrowings	0.0	625.6
Interest expenses paid (-) / interest income received	(55.4)	(13.1)
Cash inflow from shareholder loan	0.0	120.0
Cash flows from financing activities	**(89.8)**	**1,550.9**
Change in cash and cash equivalents	**(5.1)**	**57.3**
Effects of exchange rate changes on cash and cash equivalents	0.4	0.2
Cash and cash equivalents at the beginning of the period	67.0	9.5
Cash and cash equivalents at the end of the period	**62.2**	**67.0**

(1) Represents the gross cash outflow for obtaining control over the advanced ceramics business whereas €183.9 million were taken over from subsidiaries.

Cash flows from operating activities

Cash flows from operating activities increased from €105.2 million in 2013 to €130.0 million in 2014. The main reasons for the increase were the transaction related costs, which incurred in connection with the acquisition of the advanced ceramics business and which were immediately expensed and cash effective in 2013 as well as higher tax payments of €15.1 million.

Cash flows from investing activities

Cash flows from investing activities decreased from €-1,598.8 million in 2013 to €-45.3 million in 2014. Cash outflows in 2013 were principally driven by the cash effective consideration transferred for the acquisition of the advanced ceramics business which amount to €1,543.5. Furthermore capital expenditures in property, plant and equipment decreased from €54.0 million in 2013 to €47.7 million in 2014. Additionally grants for investments in the amount of €6.1 million were received in 2014.

Cash flows from financing activities

Cash flows from financing activities decreased from €1,550.9 million in 2013 to €-89.8 million in 2014 again due to the acquisition of the advanced ceramics business, which was financed from proceeds of borrowings, the issue of bonds and a shareholder loan as well as equity contributions by the shareholder in 2013. The amount for paid interest increased from €13.1 million in 2013 to €55.4 million due to the new financing structure that was implemented in August 2013.

Capital Expenditures

The following table provides an overview of our net capital expenditures in 2014 compared to 2013 without considering the additions resulting from the business combination:

	Year Ended December 31,	
	2014	**2013**
	(in € million)	
Capital investments in intangible assets	1.4	2.4
Capital investments in property, plant and equipment	29,6	39.3
Capacity Enlargement Marktredwitz	15.3	14.8
Total	**46,3**	**56,5**
As a percentage of total net sales (%)....................................	9,8	12,9

Our capital expenditures are primarily connected to the growth and maintenance of our manufacturing facilities as well as to our corporate facilities. At our manufacturing sites we invest in machinery and manufacturing equipment on an ongoing basis. We are able to operate with required maintenance capital expenditures of approximately €15 million annually while the rest of our capital investments include costs incurred for expansion, construction and acquisitions of equipment and properties and for environmental matters relating to safety or health and other costs.

Our capital expenditures have significantly increased in 2013 and 2014 due to the expansion of our manufacturing plant for ceramic components for hip joint implants in Marktredwitz. Our expanded Marktredwitz facility, together with our Plochingen facility provides us with two full scale production sites, thereby allowing us to further provide security of supply for our customers, ensuring capacity to address future demand and enhancing our manufacturing scale advantage over our competitors.

Material Commitments and Contingencies

Net debt

As of December 31, 2014, the gross financial debt, the cash balance, the net debt as well as the undrawn Revolving Credit Facility show the following numbers:

	Year Ended December 31,	
	2014	**2013**
	(in € million)	**(in € million)**
Gross financial debt (without accrued transaction costs)	968.8	970.1
Thereof bond	*306.7*	*306.7*
Thereof term loans(*)	*674.3*	*636.7*
Thereof mark-to-market measure cross-currency swap	*(24.6)*	*14.1*
Thereof accrued interest	12.3	12.6
Cash	62.2	67.0
Net debt	906.5	903.1
Undrawn revolver credit facility	100.0	100.0
Net Debt to LTM Adjusted EBITDA(**) ratio	5,9	6,4

(*) Change in term loans including FX-effect and repayment

(**) Adjusted EBITDA 2014 EUR 154.1 million, 2013 EUR 140,1million

Contractual Obligations resulting from the financing

The following table summarizes our contractual obligations resulting from the senior credit facilities as well as the notes as of December 31, 2014 including repayments and interest payments:

	Payments due by period								
Contractual Obligations	**Total**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022 and beyond**
				(in € million)					
Senior Credit Facilities[1]	842.8	33.7	33.0	33.4	34.7	35.2	672.5	0.0	0.4
Notes[2]	483.8	25.3	25.3	25.3	25.3	25.3	25.3	332.0	0.0
Total	**1,326.6**	**59.0**	**58.3**	**58.7**	**60.0**	**60.5**	**697.8**	**332.0**	**0.4**

(1) Payments presented in the table are calculated using the forward interest rates and forward USD/EUR rates as of December 31, 2014. Assumes the minimum payments contractually obliged to, any USD denominated loans under the Term Loan Facility will have 0.25% of initial principal amount ($472.5 million) amortizing each quarter while the EUR denominated loans under the Term Loan Facility will have no interim amortization.

(2) Assumes no optional repayments.

Pension Commitments

We provide our employees with various defined benefit and defined contribution pension plans in relation to retirement, invalidity and death benefits. The promised benefits differ from country to country depending on the legal, tax and economic conditions. Furthermore, the existing plans are subject to the respective local requirements, the financing and the plan assets of pension plans.The following table shows the pension obligations and market value of the plan assets of the defined benefit plans at the beginning and at the end of the financial year 2014:

	Year ended December 31, 2014		
	German plans	Foreign plans	Total
		(in € million)	
Contractual obligation at the beginning of the year	**55.6**	**10.2**	**65.8**
Service costs	0.6	0.0	0.6
Interest expenses	1.9	0.5	2.4
Actuarial (gains)/losses (Remeasurements)	28.7	1.5	30.2
Currency Translation	0.0	0.9	0.9
Benefit payment	(3.1)	(0.3)	(3.4)
Contractual obligation at the end of the year	**83.7**	**12.8**	**96.5**
Market value of the plan assets at the beginning of the financial year	**0.0**	**4.7**	**4.7**
Expected income from plan assets	0.0	0.1	0.1
Employers' contributions	0.0	0.3	0.3
Actuarial (gains)/losses (Remeasurements)	0.0	0.0	0.0
Currency translation	0.0	0.3	0.3
Benefit payments	0.0	(0.3)	(0.3)
Market value of the plan assets at the end of the year	**0.0**	**5.1**	**5.1**
Net liability/provisions for pension benefits	**83.7**	**7.7**	**91.4**

The actuarial loss is primarily due to the reduction in the discount rate for the German plans (2014: 1.9%, 2013: 3.5%). The expected contributions to the defined benefit plans by the employer until 31 December 2015 will amount to €0.3 million. For the financial year 2015 benefit payments in the amount of €2.6 million are expected.

Contingencies

Group Companies are parties to a limited number of litigations. These processes are linked with the normal business activities and mainly relate to litigations referring to issues under commercial law, product liability law and environmental law. In this context, the Group Companies recognize provisions if such an obligation is probable and if the amount can be reliably estimated. The Group is disclosing such obligations if there is a reasonable possibility that a material expense arose.

No litigations are currently outstanding that could have a material impact on the Group's net asset position, financial position and results of operations.

We anticipate that there are no further cases that would materially affect the Group's net assets, financial position and results of operations. We will adjust the amount of the provisions taking into account the new information, if further cases should arise.

Critical Accounting Policies and Significant Accounting Estimates

Please refer to our consolidated financial statements as of December 31, 2014 for a detailed description of the accounting policies and accounting estimates applied.

Recent Developments

Currently there are no developments to report.