Second Quarter and First Half 2010 Preliminary Results Release



SAP AG Walldorf, Germany Tuesday, July 27, 2010



Safe Harbor Statement



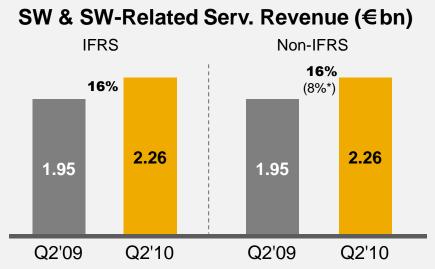
Any statements contained in this document that are not historical facts are forwardlooking statements as defined in the U.S. Private Securities Litigation Reform Act of 1995. Words such as "anticipate," "believe," "estimate," "expect," "forecast," "intend," "may," "plan," "project," "predict," "should" and "will" and similar expressions as they relate to SAP are intended to identify such forward-looking statements. SAP undertakes no obligation to publicly update or revise any forward-looking statements. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. The factors that could affect SAP's future financial results are discussed more fully in SAP's filings with the U.S. Securities and Exchange Commission (SEC), including SAP's most recent Annual Report on Form 20-F filed with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on these forwardlooking statements, which speak only as of their dates.

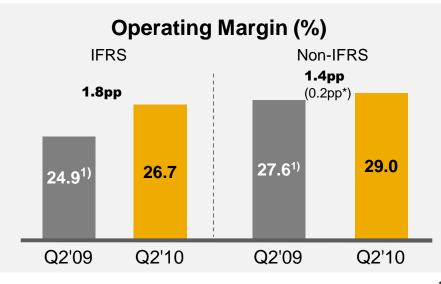
Agenda

1. Income Statement

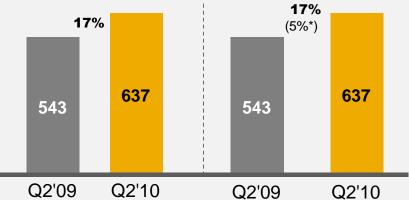
- 2. Financial Position and Cash Flow
- 3. Headcount
- 4. Outlook

Key Figures Second Quarter 2010

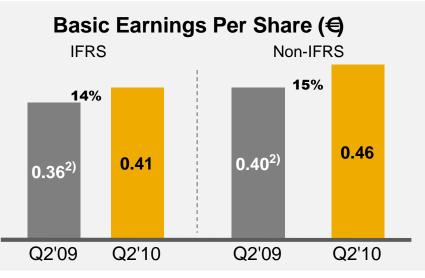








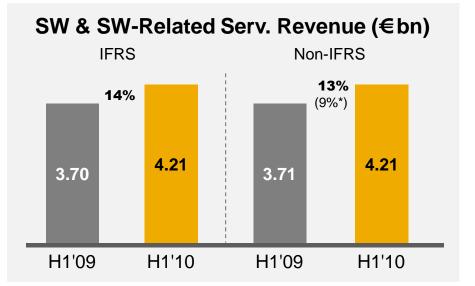
Non-IFRS

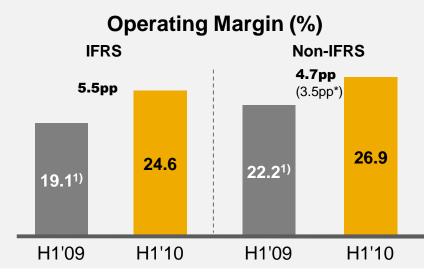


* at constant currencies

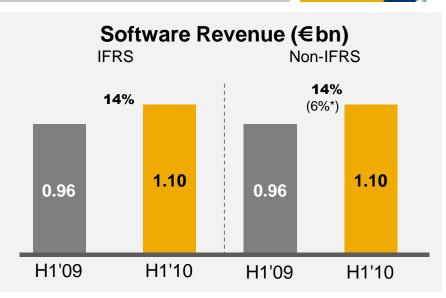
1) includes negative effect of 0.7pp (IFRS) and 0.7pp (Non-IFRS) from Q2 2009 restructuring charges 2) includes negative effect of 0.01€ (IFRS) and 0.01€ (Non-IFRS) from Q2 2009 restructuring charges

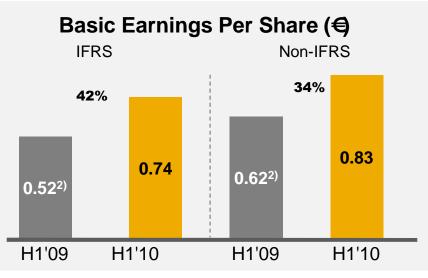






SAP





* at constant currencies

1) includes negative effect of 3.7pp (IFRS) and 3.6pp (Non-IFRS) from H1 2009 restructuring charges 2) includes negative effect of 0.11€ (IFRS) and 0.11€ (Non-IFRS) from H1 2009 restructuring charges

Income Statement Overview Second Quarter 2010 (IFRS and Non-IFRS)



| | IFRS Non-IFRS | | | | | IFRS | | | | |
|---|---------------|------------|------------|------------|------------|------------|--------------------------------------|--|--|--|
| €millions, unless otherwise stated | Q2 2010 | Q2 2009 | ∆ % | Q2 2010 | Q2 2009 | ∆ % | Δ % constant currencies | | | |
| Software revenue | 637 | 543 | 17 | 637 | 543 | 17 | 5 | | | |
| Support revenue | 1,526 | 1,337 | 14 | 1,526 | 1,337 | 14 | 8 | | | |
| Subscription & other softwrel. serv. rev. | 95 | 73 | 30 | 95 | 73 | 30 | 26 | | | |
| SSRS revenue | 2,258 | 1,953 | 16 | 2,258 | 1,953 | 16 | 8 | | | |
| Consulting revenue | 528 | 517 | 2 | 528 | 517 | 2 | -5 | | | |
| Training revenue | 71 | 70 | 1 | 71 | 70 | 1 | -4 | | | |
| Other service revenue | 18 | 23 | -22 | 18 | 23 | -22 | -26 | | | |
| Professional and other service revenue | 617 | 610 | 1 | 617 | 610 | 1 | -6 | | | |
| Other revenue | 19 | 13 | 46 | 19 | 13 | 46 | 38 | | | |
| Total revenue | 2,894 | 2,576 | 12 | 2,894 | 2,576 | 12 | 5 | | | |
| Total operating expenses | -2,120 | -1,935 | 10 | -2,054 | -1,866 | 10 | 4 | | | |
| Operating profit | 774 | 641 | 21 | 840 | 710 | 18 | 5 | | | |
| Profit after tax | 491 | 426 | 15 | 551 | 478 | 15 | | | | |
| Basic earnings per share, in € | 0.41 | 0.36 | 14 | 0.46 | 0.40 | 15 | | | | |

Income Statement Overview First Half 2010 (IFRS and Non-IFRS)



| | IFRS | FRS Non-IFRS | | | | Non-IFRS | | FRS Nor | | |
|---|------------|--------------|------------|------------|------------|------------|--------------------------------------|---------|--|--|
| € millions, unless otherwise stated | 6M 2010 | 6M 2009 | ∆ % | 6M 2010 | 6M 2009 | ∆ % | Δ % constant currencies | | | |
| Software revenue | 1,101 | 962 | 14 | 1,101 | 962 | 14 | 6 | | | |
| Support revenue | 2,920 | 2,589 | 13 | 2,920 | 2,600 | 12 | 9 | | | |
| Subscription & other softwrel. serv. rev. | 184 | 144 | 28 | 184 | 144 | 28 | 26 | | | |
| SSRS revenue | 4,205 | 3,695 | 14 | 4,205 | 3,706 | 13 | 9 | | | |
| Consulting revenue | 1,007 | 1,071 | -6 | 1,007 | 1,071 | -6 | -10 | | | |
| Training revenue | 130 | 142 | -8 | 130 | 142 | -8 | -12 | | | |
| Other service revenue | 37 | 47 | -21 | 37 | 47 | -21 | -21 | | | |
| Professional and other service revenue | 1,174 | 1,260 | -7 | 1,174 | 1,260 | -7 | -10 | | | |
| Other revenue | 24 | 19 | 26 | 24 | 19 | 26 | 21 | | | |
| Total revenue | 5,403 | 4,974 | 9 | 5,403 | 4,985 | 8 | 4 | | | |
| Total operating expenses | -4,072 | -4,026 | 1 | -3,951 | -3,879 | 2 | -1 | | | |
| Operating profit | 1,331 | 948 | 40 | 1,452 | 1,106 | 31 | 20 | | | |
| Profit after tax | 878 | 622 | 41 | 986 | 740 | 33 | | | | |
| Basic earnings per share, in € | 0.74 | 0.52 | 42 | 0.83 | 0.62 | 34 | | | | |

IFRS Revenue Breakdown by Region Second Quarter 2010



3%

9%

0%

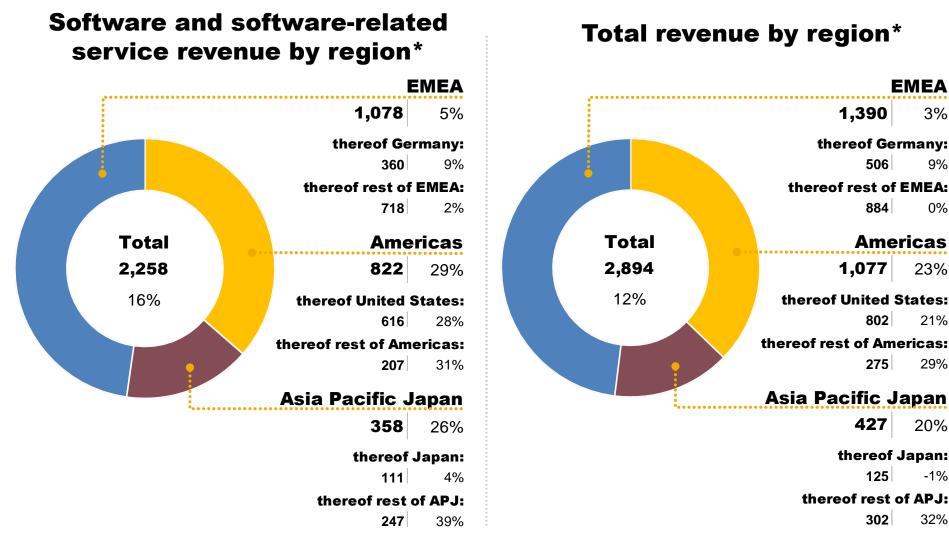
21%

29%

-1%

32%

€millions | yoy percent change



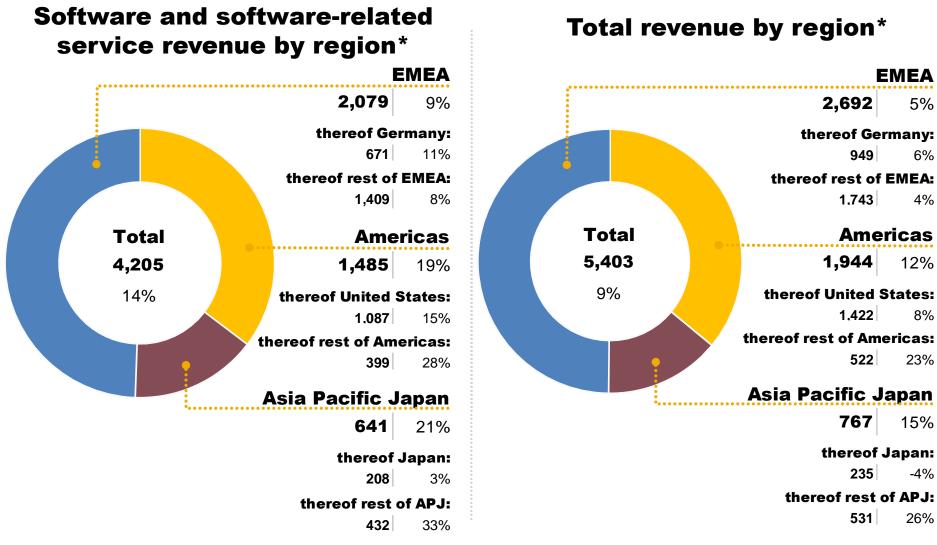
© SAP Investor Relations, Q2&H1 2010 Preliminary Results Release / Page 8

* Based on customer location

IFRS Revenue Breakdown by Region First Half 2010



€millions | yoy percent change



* Based on customer location

Non-IFRS Revenue Breakdown by Region Second Quarter 2010

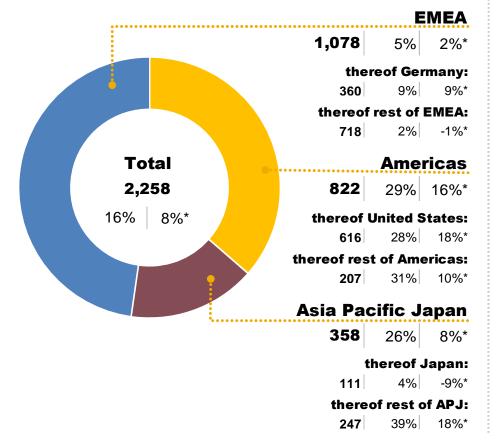


€millions | yoy percent change | yoy percent constant currency change

Software and software-related service revenue by region**

EMEA 1,390 3% 1%* thereof Germany: 506 9% 9%* thereof rest of EMEA: 0% 884 -3%* Total **Americas** 2,894 1,077 23% 11%* 5%* 12% thereof United States: 802 21% 12%* thereof rest of Americas: 275 29% 8%* **Asia Pacific Japan** 20% 3%* 427 thereof Japan: 125 -1% -13%* thereof rest of APJ: 302 32% 12%*

Total revenue by region**



Non-IFRS Revenue Breakdown by Region First Half 2010



€millions | yoy percent change | yoy percent constant currency change

Software and software-related service revenue by region**

EMEA 2,692 5% 2%* thereof Germany: 949 6% 6%* thereof rest of EMEA: 1.743 4% 1%* Total **Americas** 5,403 1,944 11% 6%* 8% 4%* thereof United States: 1.422 8% 6%* thereof rest of Americas: 522 23% 8%* **Asia Pacific Japan**

Total revenue by region**

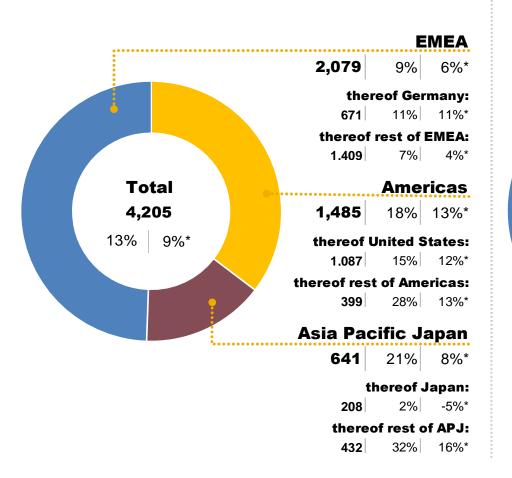
767 15% 2%*

thereof Japan:

235 -4% -11%*

thereof rest of APJ: 531 26% 9%*

* At constant currencies ** Based on customer location



Margin Analysis Second Quarter 2010 (IFRS and Non-IFRS)



| | IFRS Non-IFRS | | | IFRS | | |
|------------------------------------|---------------|-------|-------------|-------|-------|-------------|
| | Q2 | Q2 | . 0/ | Q2 | Q2 | . 0/ |
| €millions, unless otherwise stated | 2010 | 2009 | $\Delta \%$ | 2010 | 2009 | $\Delta \%$ |
| SSRS Revenue | 2,258 | 1,953 | 16 | 2,258 | 1,953 | 16 |
| SSRS Cost | -415 | -400 | 4 | -374 | -352 | 6 |
| SSRS margin in % | 81.6 | 79.5 | 2.1pp | 83.4 | 82.0 | 1.4pp |
| PSOS Revenue | 617 | 610 | 1 | 617 | 610 | 1 |
| PSOS Cost | -497 | -467 | 6 | -496 | -466 | 6 |
| PSOS margin in % | 19.4 | 23.4 | -4.0pp | 19.6 | 23.6 | -4.0pp |
| SSRS & PSOS margin in % | 68.3 | 66.2 | 2.1pp | 69.7 | 68.1 | 1.6pp |
| Research and development | -397 | -373 | 6 | -396 | -372 | 6 |
| - as a percentage of total revenue | 13.7 | 14.5 | -0.8pp | 13.7 | 14.4 | -0.7pp |
| Sales and marketing | -658 | -561 | 17 | -643 | -542 | 19 |
| - as a percentage of total revenue | 22.7 | 21.8 | 0.9pp | 22.2 | 21.0 | 1.2pp |
| General and administration | -156 | -123 | 27 | -147 | -123 | 20 |
| - as a percentage of total revenue | 5.4 | 4.8 | 0.6pp | 5.1 | 4.8 | 0.3pp |
| Restructuring charges | -1 | -17 | N/A | -1 | -17 | N/A |
| - as a percentage of total revenue | 0.0 | 0.7 | -0.7pp | 0.0 | 0.7 | -0.7pp |
| Operating margin in % | 26.7 | 24.9 | 1.8pp | 29.0 | 27.6 | 1.4pp |

SSRS: Software and software-related services PSOS: Professional services and other services

Margin Analysis First Half 2010 (IFRS and Non-IFRS)



| | IFRS Non-IFRS | | | Non-IFRS | | |
|------------------------------------|---------------|--------|-------------|----------|--------|-------------|
| | H1 | H1 | . 0/ | H1 | H1 | |
| €millions, unless otherwise stated | 2010 | 2009 | $\Delta \%$ | 2010 | 2009 | $\Delta \%$ |
| SSRS Revenue | 4,205 | 3,695 | 14 | 4,205 | 3,706 | 13 |
| SSRS Cost | -814 | -786 | 4 | -733 | -687 | 7 |
| SSRS margin in % | 80.6 | 78.7 | 1.9pp | 82.6 | 81.5 | 1.1pp |
| PSOS Revenue | 1,174 | 1,260 | -7 | 1,174 | 1,260 | -7 |
| PSOS Cost | -948 | -989 | -4 | -946 | -987 | -4 |
| PSOS margin in % | 19.3 | 21.5 | -2.2pp | 19.4 | 21.7 | -2.3pp |
| SSRS & PSOS margin in % | 67.2 | 64.2 | 3.0рр | 68.8 | 66.3 | 2.5pp |
| Research and development | -790 | -738 | 7 | -787 | -736 | 7 |
| - as a percentage of total revenue | 14.6 | 14.8 | -0.2pp | | 14.8 | -0.2pp |
| Sales and marketing | -1,215 | -1,074 | 13 | -1,188 | -1,037 | 15 |
| - as a percentage of total revenue | 22.5 | 21.6 | 0.9pp | 22.0 | 20.8 | 1.2pp |
| General and administration | -304 | -262 | 16 | -295 | -262 | 13 |
| - as a percentage of total revenue | 5.6 | 5.3 | 0.3pp | 5.5 | 5.3 | 0.2pp |
| Restructuring charges | -1 | -183 | N/A | -1 | -178 | N/A |
| - as a percentage of total revenue | 0.0 | 3.7 | -3.7pp | 0.0 | 3.6 | -3.6pp |
| Operating margin in % | 24.6 | 19.1 | 5.5pp | 26.9 | 22.2 | 4.7pp |

SSRS: Software and software-related services PSOS: Professional services and other services



1. Income Statement

2. Financial Position and Cash Flow

- 3. Headcount
- 4. Outlook

Financial Position (IFRS) June 30, 2010



Assets

| €millions | 06/30/10 | 12/31/09 |
|---|----------|----------|
| Cash, cash equivalents and other financial assets | 4,179 | 2,370 |
| Trade and other | | |
| receivables | 2,768 | 2,546 |
| Other non-financial assets and tax assets | 419 | 339 |
| Total current assets | 7,366 | 5,255 |
| Goodwill | 5,136 | 4,994 |
| Intangible assets | 829 | 894 |
| Property, plant, and equipment | 1,415 | 1,371 |
| Other noncurrent assets | 926 | 860 |
| Total non-current assets | 8,306 | 8,119 |
| Total assets | 15,672 | 13,374 |

Equity and liabilities

| €millions | 06/30/10 | 12/31/09 |
|-----------------------------|----------|----------|
| Financial liabilities | 219 | 146 |
| Deferred income | 1,919 | 598 |
| Other liabilities | 2,045 | 2,672 |
| Current liabilities | 4,183 | 3,416 |
| Financial liabilities | 1,764 | 729 |
| Provisions | 224 | 198 |
| Other non-curr. liabilities | 530 | 540 |
| Non-current liabilities | 2,518 | 1,467 |
| Total liabilities | 6,701 | 4,883 |
| Total equity | 8,971 | 8,491 |
| Equity and liabilities | 15,672 | 13,374 |

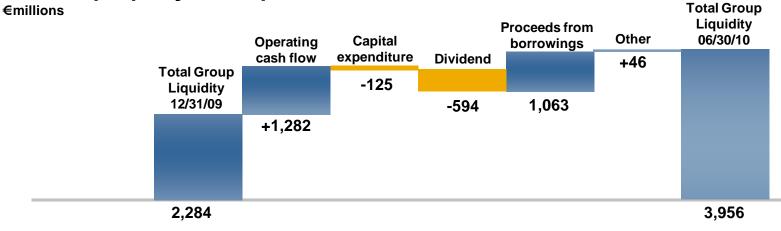
Financial Position, Cash Flow, Liquidity June 30, 2010



| | 06/30/2010 | 12/31/2009 | Δ |
|---|------------|------------|--------------|
| Net liquidity (\in millions) ¹⁾ | 2,194 | 1,581 | 613 |
| Days sales outstanding (DSO) | 73 | 79 | -6 days |
| Equity ratio | 57% | 63% | - 6pp |

| €millions, unless otherwise stated | 6M 2010 | 6M 2009 | Δ % |
|---|---------|---------|------------|
| Operating cash flow | 1,282 | 1,823 | -30% |
| - Capital expenditure | -125 | -106 | 18% |
| Free cash flow | 1,157 | 1,717 | -33% |
| Free cash flow as a percentage of total revenue | 21% | 35% | -13pp |
| Operating cash flow as a percentage of profit after tax | 146% | 293% | -147pp |

Total Group Liquidity²⁾ Development



Defined as cash and cash equivalents + short-term investments less bank loans
 Defined as cash and cash equivalents + short-term investments



- 1. Income Statement
- 2. Financial Position and Cash Flow
- 3. Headcount
- 4. Outlook



Headcount June 30, 2010

full-time equivalents | Δ 6M | Δ %6M

Headcount by Region Headcount by Functional Area EMEA 25,325 -37 0% **Research and development** 14,346 -467 -3% **Sales and marketing** 9,731 218 2% Total Americas Total General and admin. 12,316 48,021 342 3% 48,021 3,026 -25 -1% 437 1% 437 1% Infrastructure 1,723 287 20% SW and SW-rel. services 7,001 579 9% **Asia Pacific Japan** 10,380 132 1% Prof. svs. and other svs. 12,194 -1% -155



- 1. Income Statement
- 2. Financial Position and Cash Flow
- 3. Headcount
- 4. Outlook



SAP is providing the following outlook for the full-year 2010,

which now takes into account the acquisition of Sybase:

- The Company expects full-year 2010 Non-IFRS software and software related service revenue (1) to increase in a range of 9% 11% at constant currencies (2009: €8.2 billion). SAP's business, excluding the contribution from Sybase, is expected to contribute 6 8 percentage points to this growth.
- The Company expects the full-year 2010 Non-IFRS operating margin to be in a range of 30% 31% (2009: 27.4%) at constant currencies.
- The Company projects an effective tax rate of 27.5% 28.5% (based on IFRS) for 2010 (2009: 28.1%).

(1) Unchanged from the past, software and software related service revenue continues to only include software and services directly related to software. Revenues from all other services (including consulting, training and Sybase's messaging services) continue to be reported as Professional Services and Other Service Revenue



APPENDIX

Explanation of Non-IFRS Measures, Free Cash Flow and Constant Currency Growth Rates



Explanations of Non-IFRS Measures

This document discloses certain financial measures, such as non-IFRS revenues, non-IFRS expenses, non-IFRS operating income, non-IFRS operating margin, non-IFRS net income, non-IFRS earnings per share, free cash flow as well as constant currency revenue and operating income measures that are not prepared in accordance with IFRS and are therefore considered non-IFRS financial measures. Our non-IFRS financial measures may not correspond to non-IFRS financial measures that other companies report. The non-IFRS financial measures that we report should be considered in addition to, and not as substitutes for or superior to, revenue, operating income, cash flows, or other measures of financial performance prepared in accordance with IFRS. Our non-IFRS financial measures in the tables on the pages F4 to F7 above.

We believe that the supplemental historical and prospective non-IFRS financial information presented here provides useful supplemental information to investors because it is the same information used by our management in running our business and making financial, strategic and operational decisions – in addition to financial data prepared in accordance with IFRS – to attain a more transparent understanding of our past performance and our future results. The non-IFRS measures as defined below replaced the Non GAAP measures which we used until the termination of our US GAAP reporting. We use these non-IFRS measures consistently in our planning and forecasting, reporting, compensation and external communication. Specifically,

- Our management primarily uses these non-IFRS measures rather than IFRS measures as the basis for making financial, strategic and operating decisions.
- The variable remuneration components of our board members and employees are based on revenue and operating profit. However, the basis for the compensation is on non-IFRS revenue and non-IFRS operating profit rather than the respective IFRS measures.
- The annual budgeting process involving all management units is based on non-IFRS revenues and non-IFRS operating income numbers rather than IFRS numbers with costs such as share-based compensation and restructuring only being considered on corporate level.
- All monthly forecast and performance reviews with all senior managers globally are based on these non-IFRS measures, rather than IFRS numbers.
- Both, company-internal target setting and guidance provided to the capital markets are based on non-IFRS revenues and non-IFRS income measures rather than IFRS numbers.

We believe that our non-IFRS measures are useful to investors for the following reasons:

- The non-IFRS measures provide investors with insight into management's decision-making since management uses these non-IFRS measures to run our business and make financial, strategic and operating decisions.
- The non-IFRS measures provide investors with additional information that enables a comparison of year-over-year operating performance by eliminating certain direct effects of acquisitions.

Our non-IFRS financial measures reflect adjustments based on the items below, as well as the related income tax effects:

Non-IFRS revenue:

Revenues in this document identified as non-IFRS revenue have been adjusted from the respective IFRS numbers by including the full amount of support revenue that would have been recorded by an entity acquired by SAP had it remained a stand-alone entity but which we are not permitted to record as revenue under IFRS due to fair value accounting for the support contracts in effect at the time of the respective acquisition.

Under IFRS, we record at fair value the support contracts in effect at the time an entity was acquired. Consequently, our IFRS support revenue, our IFRS software and software-related service revenue and our IFRS total revenue for periods subsequent to acquisitions do not reflect the full amount of support revenue that would have been recorded for these support contracts absent the acquisition by SAP. Adjusting revenue numbers for this revenue impact (if significant) provides additional insight into the comparability across periods of our ongoing performance.

Non-IFRS operating expense:

Operating expense figures in this report that are identified as non-IFRS operating expense have been adjusted by excluding the following acquisition-related charges:

- Acquisition related charges
 - o Amortization expense/impairment charges of intangibles acquired in business combinations and certain standalone acquisitions of intellectual property (including purchased in-process research and development)
 - o Restructuring expenses and settlements of pre-existing relationships incurred in connection with a business combination
 - o Acquisition-related third-party expenses
- Discontinued Activities: Results of the discontinued operations that qualify as such under IFRS in all respects except that they do not represent a major line of business

Non-IFRS operating income, non-IFRS operating margin, non-IFRS net income and non-IFRS earnings per share:

Operating income, operating margin, net income and earnings per share in this document identified as non-IFRS operating income, non-IFRS operating margin, non-IFRS net income and non-IFRS earnings per share have been adjusted from the respective operating income, operating margin, net income and earnings per share numbers as recorded under IFRS by adjusting for the above mentioned non-IFRS revenues and non-IFRS expenses.

We exclude the acquisition related expense adjustments for the purpose of calculating non-IFRS operating income, non-IFRS operating margin, non-IFRS net income and non-IFRS earnings per share when evaluating the continuing operational performance of the Company because these expenses generally cannot be changed or influenced by management after the relevant acquisition other than by disposing of the acquired assets. Since management at levels below the Executive Board has no influence on these expenses we generally do not consider these expenses for the purpose of evaluating the performance of management units.

Explanation of Non-IFRS Measures, Free Cash Flow and Constant Currency Growth Rates

We include the revenue adjustements outlined above and exclude the expense adjustements when making decisions to allocate resources, both on a Company level and at lower levels of the organization. In addition, we use these non-IFRS measures to gain a better understanding of the Company's comparative operating performance from period to period. We believe that our non-IFRS financial measures described above have limitations, which include but are not limited to the following:

- The eliminated amounts may be material to us.
- Without being analyzed in conjunction with the corresponding IFRS measures the non-IFRS measures are not indicative of our present and future performance, foremost for the following reasons:
 - o While our non-IFRS income numbers reflect the elimination of certain acquisition-related expenses, no eliminations are made for the additional revenues and other revenues that result from the acquisitions.
 - o The acquisition-related charges that we eliminate in deriving our non-IFRS income numbers are likely to recur should SAP enter into material business combinations in the future.
 - o The acquisition-related amortization expense that we eliminate in deriving our non-IFRS income numbers is a recurring expense that will impact our financial performance in future years.
- The revenue adjustment for the fair value accounting of the acquired entities' support contracts and the expense adjustment for acquisition-related charges do not arise from a common conceptual basis. This is because the
 revenue adjustment aims to improve the comparability of the initial post-acquisition period with future post-acquisition periods while the expense adjustment aims to improve the comparability between post-acquisition periods
 and pre-acquisition periods. This should particularly be considered when evaluating our non-IFRS operating income and non-IFRS operating margin numbers as these combine our non-IFRS revenue and non-IFRS expenses
 despite the absence of a common conceptual basis.

Additionally, our non-IFRS measures have been adjusted from the respective IFRS numbers for the results of the discontinued operations that qualify as such under IFRS in all respects except that they do not represent a major line of business. We refer to these activities as "discontinued activities." Under our U.S. GAAP which we provided until 2009, we presented the results of operations of the TomorrowNow entities as discontinued operations. Under IFRS, results of discontinued operations may only be presented as discontinued operations if a separate major line of business or geographical area of operations is discontinued. Our TomorrowNow operations were not a separate major line of business and thus did not qualify for separate presentation under IFRS. We believe that this additional non-IFRS adjustment to our IFRS numbers for the results of our discontinued TomorrowNow activities is useful to investors for the following reasons:

- Despite the migration from U.S. GAAP to IFRS, we will continue to internally view the ceased TomorrowNow activities as discontinued activities and thus will continue to exclude potential future TomorrowNow results, which are
 expected to mainly comprise of expenses in connection with the Oracle lawsuit, from our internal management reporting, planning, forecasting, and compensation plans. Therefore, adjusting our non-IFRS measures for the results
 of the discontinued TomorrowNow activities provides insight into the financial measures that SAP will use internally beginning in 2010 with our migration to IFRS.
- By adjusting the non-IFRS numbers for the results from our discontinued TomorrowNow operations, the non-IFRS numbers are more comparable to the non-GAAP measures that SAP used through the end of 2009, which makes SAP's performance measures before and after the full IFRS migration easier to compare.

We believe, however, that the presentation of the non-IFRS measures in conjunction with the corresponding IFRS measures as well as the relevant reconciliations, provides useful information to management and investors regarding present and future business trends relating to our financial condition and results of operations. We therefore do not evaluate our growth and performance without considering both non-IFRS measures and the relevant IFRS measures. We caution the readers of this document to follow a similar approach by considering our non-IFRS measures only in addition to, and not as a substitute for or superior to, revenues or other measures of our financial performance prepared in accordance with IFRS.

Free Cash Flow

٠

We use our free cash flow measure to estimate the cash flow remaining after all expenditures required to maintain or expand the organic business have been paid off. This assists management with the supplemental information to assess our liquidity needs. We calculate free cash flow as net cash from operating activities minus additions to non-current assets, excluding additions from acquisitions. Free cash flow should be considered in addition to, and not as a substitute for or superior to, cash flow or other measures of liquidity and financial performance prepared in accordance with IFRS.

Constant Currency Period-Over-Period Changes

We believe it is important for investors to have information that provides insight into our sales. Revenue measures determined under IFRS provide information that is useful in this regard. However, both sales volume and currency effects impact period-over-period changes in sales revenue. We do not sell standardized units of products and services, so we cannot provide relevant information on sales volume by providing data on the changes in product and service units sold. To provide additional information that may be useful to investors in breaking down and evaluating changes in sales volume, we present information about our revenue and various values and components relating to operating income that are adjusted for foreign currency effects. We calculate constant currency year-over-year changes in revenue and operating income by translating foreign currencies using the average exchange rates from the previous year instead of the report year.

We believe that data on constant currency period-over-period changes has limitations, particularly as the currency effects that are eliminated constitute a significant element of our revenue and expenses and may severely impact our period-over-period changes to the analysis of changes in volume as one element of the full change in a financial measure. We do not evaluate our results and performance without considering both constant currency period-over-period changes in non-IFRS operating income on the one hand and changes in revenue, expenses, income, or other measures of financial performance prepared in accordance with IFRS on the other. We caution the readers of this document to follow a similar approach by considering data on constant currency period-over-period changes only in addition to, and not as a substitute for or superior to, changes in revenue, expenses, income, or other measures of financial performance prepared in accordance with IFRS.