

**GENZYME CORPORATION**  
**CASH FLOW RETURN ON INVESTED CAPITAL CALCULATION**  
(in millions, except percentages)

The company uses Cash Flow Return on Tangible Invested Capital (CFROI) as a measure of the efficiency and effectiveness of its use of capital. CFROI is not a measure of financial performance under generally accepted accounting principles (GAAP) and may not be defined and calculated by other companies in the same manner. This non-GAAP financial measure is not intended to be considered in isolation or as a substitute for GAAP measures.

**We define CFROI as follows:**

$$\frac{\text{Total Adjusted Cash Profits}}{\text{Average Tangible Invested Capital}}$$

**We define Adjusted Cash Profits as follows:**

GAAP net income (loss)
+ Operating lease expense
+ Depreciation expense
+ Amortization expense, net of tax
- Other income (expenses), net of tax
+ Other non-operating items, net of tax
+ Acquisition related expense, net of tax
+ Non-GAAP research and development expense
<b>= Total Adjusted Cash Profits</b>

**We define Tangible Invested Capital as follows:**

Total assets
- Non-interest bearing liabilities <sup>e</sup>
- Deferred taxes
+ Capitalized research and development <sup>f</sup>
+ Capitalized operating leases <sup>g</sup>
+ Accumulated depreciation
- Goodwill and intangibles, net
- Excess cash <sup>h</sup>
- Long-term investments
<b>= Total Tangible Invested Capital</b>

**We define Average Tangible Invested Capital as follows:**

Prior year tangible invested capital
+ Current year tangible invested capital
divided by 2
<b>= Average Tangible Invested Capital</b>

**Consolidated CFROI Calculation<sup>a</sup>**

	Consolidated			
	2006	2007	2008	2009
<b>Adjusted Cash Profits</b>				
GAAP net income (loss)	\$ (16.8)	\$ 480.2	\$ 421.1	\$ 422.3
Operating lease expense	60.9	74.3	75.2	81.8
Depreciation expense	122.0	137.1	148.4	190.1
Amortization expense, net of tax <sup>b</sup>	132.3	129.5	151.0	185.0
Other income (expenses), net of tax <sup>b</sup>	(87.7)	(52.0)	(28.0)	(27.7)
Other non-operating items, net of tax <sup>c</sup>	134.3	7.2	1.5	19.2
Acquisition related expense, net of tax	404.3	109.7	0.0	48.5
Non-GAAP research and development <sup>d</sup>	565.4	666.4	1,181.8	803.9
<b>Total Adjusted Cash Profits</b>	<b>\$ 1,314.7</b>	<b>\$ 1,552.4</b>	<b>\$ 1,951.0</b>	<b>\$ 1,723.1</b>
Investment Income, net of tax	35.6	44.6	32.6	11.2
<b>Total Adjusted Cash Profits</b>	<b>\$ 1,350.3</b>	<b>\$ 1,597.0</b>	<b>\$ 1,983.6</b>	<b>\$ 1,734.3</b>
<b>Tangible Invested Capital</b>				
Total assets	\$ 7,191.2	\$ 8,314.3	\$ 8,671.3	\$ 10,060.7
Non-interest bearing liabilities <sup>e</sup>	(714.4)	(891.0)	(1,233.4)	(1,237.2)
Deferred taxes	(136.9)	(260.0)	(457.3)	(555.2)
Capitalized research and development <sup>f</sup>	2,747.0	3,071.0	3,637.0	3,910.0
Capitalized operating leases <sup>g</sup>	730.8	891.6	902.4	981.6
Accumulated depreciation	695.4	836.8	904.7	1,077.8
Goodwill and intangibles, net	(2,790.8)	(2,959.5)	(3,055.8)	(3,716.6)
Excess cash <sup>h</sup>	(252.5)	(531.7)	(196.0)	(402.8)
Long-term investments	(673.5)	(512.9)	(344.1)	(143.8)
<b>Total Tangible Invested Capital</b>	<b>\$ 6,796.3</b>	<b>\$ 7,958.6</b>	<b>\$ 8,828.8</b>	<b>\$ 9,974.5</b>
<b>Average Tangible Invested Capital</b>	<b>6,466.0</b>	<b>7,377.5</b>	<b>8,393.7</b>	<b>9,401.7</b>
Goodwill and intangibles, net	2,790.8	2,959.5	3,055.8	3,716.6
Accumulated intangible amortization	699.2	876.3	1,103.2	1,375.7
Excess cash	252.5	531.7	196.0	402.8
Long term investments	673.5	512.9	344.1	143.8
<b>Total Invested Capital Including Cash</b>	<b>\$ 11,212.3</b>	<b>\$ 12,839.0</b>	<b>\$ 13,527.9</b>	<b>\$ 15,613.4</b>
<b>Average Invested Capital Including Cash</b>	<b>\$ 10,346.7</b>	<b>\$ 12,025.7</b>	<b>\$ 13,183.5</b>	<b>\$ 14,570.7</b>
<b>Cash Flow Return on Tangible Invested Capital</b>	<b>20.3%</b>	<b>21.0%</b>	<b>23.2%</b>	<b>18.3%</b>
<b>Cash Flow Return on Invested Capital (Excluding Excess Cash)</b>	<b>13.1%</b>	<b>13.3%</b>	<b>15.0%</b>	<b>11.9%</b>

**Notes:**

<sup>a</sup> For purposes of the CFROI calculation discontinued operations including assets and liabilities held for sale are included in all line items.

<sup>b</sup> Tax effect on:	2006	2007	2008	2009
Other income (expenses)	50.2	29.8	16.0	12.3
Amortization expense	(77.0)	(72.4)	(75.4)	(81.4)

<sup>c</sup> Represents in 2009, gain on acquisition of business of \$24.2 net of tax of (\$6.6) and minority interest of \$2.5 net of tax of (\$0.9), in 2008 minority interest of \$2.2 net of tax of (\$0.8), equity in income of equity method investments of \$0.2 net of tax of (\$0.1), in 2007 minority interest of \$3.9 net of tax of (\$1.4), equity in income of equity method investments of \$7.4 net of tax of (\$2.7) and in 2006, minority interest of \$10.4 net of tax of (\$3.8), equity in income of equity method investments of \$15.7 net of tax of (\$5.7), impairment of goodwill of \$219.2 net of tax of (\$69.8) and settlement of tax audits of (\$31.7).

<sup>d</sup> Non-GAAP research and development expense excludes \$7.5 million of expenses related to Genzyme's joint venture with Dyax for 2007 and \$19.3 for 2006.

<sup>e</sup> Non-interest bearing liabilities equals total liabilities less debt and contingent consideration obligations.

<sup>f</sup> Represents approximate cumulative capitalized research and development, net of applicable depreciation. R&D is capitalized because it is considered an investment that should generate returns in the future.

<sup>g</sup> Represents operating lease expense multiplied by 12.

<sup>h</sup> Represents cash and short term investments less 5% of total assets.