

## Equity Research

### HEALTH CARE

Pharmaceutical Out-sourcing

October 5, 2007

**Industry Report**  
(07-097)

#### **Covance Inc.**

CVD (NYSE) \$78.05  
Outperform  
Established Growth

#### **ICON plc**

ICLR (Nasdaq) \$54.59  
Outperform  
Aggressive Growth

#### **PAREXEL International Corporation**

PRXL (Nasdaq) \$45.58  
Market Perform  
Aggressive Growth

#### **PPD, Inc.**

PPDI (Nasdaq) \$37.51  
Outperform  
Core Growth

#### **PRA International**

PRAI (Nasdaq) \$29.47  
Market Perform  
Aggressive Growth

#### **John Kreger**

312.364.8597  
jkreger@williamblair.com

#### **Natalie Freedman, CFA**

312.364.8848  
nfreedman@williamblair.com

#### **Roberto Fatta**

312.364.8797  
rfatta@williamblair.com



William Blair & Company, L.L.C.  
222 West Adams Street  
Chicago, Illinois 60606  
312.236.1600  
www.williamblair.com

# CRO Industry Update

## Results From Survey of Pharma and Biotech Sponsors

**In conjunction with Thomson CenterWatch, we conducted our third survey of pharmaceutical and biotech sponsors regarding their experience with vendors and general trends affecting the contract research organization (CRO) industry.** Earlier this year, we conducted a survey of executives at 21 pharmaceutical and biotech companies. We surveyed respondents regarding outsourcing penetration, pricing trends, safety studies, and globalization. In addition, we asked respondents to list their favorite CROs and which qualities they look for when selecting a vendor.

**ICON, Quintiles, and PPD were cited most frequently as sponsors' favorite CRO vendors to work with.** This is consistent with our perception that ICON has the best growth profile in the CRO industry, given its improving operations and relative size compared with its primary competition. It also bolsters our conviction that PPD remains a best-of-breed player, despite a disappointing June quarter.

**The majority of respondents expect their company's outsourcing levels to increase over the next two years.** This is in line with our expectation that as long as trials keep getting larger and more complicated, research-and-development spending continues to increase, and sponsor headcount remains under pressure, outsourcing penetration should keep inching up.

**Leading indicators we track confirm our survey data and continue to suggest that the pharmaceutical outsourcing environment is robust.** Following an analysis of four leading indicator data points, we believe the overall environment for pharmaceutical outsourcing remains robust, with demand gradually shifting toward later-stage clinical activities as the pharma pipeline matures.

**We reiterate our Outperform ratings on Covance, ICON, and PPD and maintain our Market Perform ratings on PRA and PAREXEL.** In our opinion, the strong demand for preclinical services in 2002-2004 is starting to filter into later-stage clinical, which should help later-stage CROs, such as PPD, PRA, PAREXEL, and ICON, as well as the clinical and central lab portions of Covance. We note that Charles River is not discussed in this report, as the content generally pertains to clinical—rather than preclinical—outsourcing.

William Blair & Company, L.L.C. has received compensation for investment banking services from Covance Inc.; ICON plc; PAREXEL International Corporation; PPD, Inc.; and PRA International within the past 12 months, or expects to receive or intends to seek compensation for investment banking services in the next 3 months. Please consult pages 33-35 of this report for all disclosures.

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*We gratefully acknowledge the significant contribution to this report by Thomson CenterWatch and Mary Jo Lamberti in particular.*

## Introduction

Earlier this year we conducted a survey of executives at 21 pharmaceutical and biotech companies in an effort to continue to monitor the major trends affecting the pharmaceutical outsourcing industry. Our findings are relevant for Covance (rated Outperform), ICON (Outperform), PPD (Outperform), PRA (Market Perform), PAREXEL (Market Perform), Kendle (not rated), and PharmaNet (not rated), as well as a host of privately owned CROs, including Quintiles. We provide conclusions and walk through the results below, but first we provide an overview of pharmaceutical outsourcing industry trends.

## Industry Trends

Each quarter we track four leading indicators to assess the health of the pharmaceutical outsourcing industry: biopharmaceutical research-and-development (R&D) spending growth, the biopharmaceutical industry's product pipeline, biotech funding, and new business awards in the sector. From our perspective, the latter indicators of future demand are all generally positive, suggesting 2007 and 2008 are shaping up to be good years for CRO earnings (see table 1). We published this data in our August 30, 2007, Preclinical Industry Update Report titled "From Mice to Men Revisited."

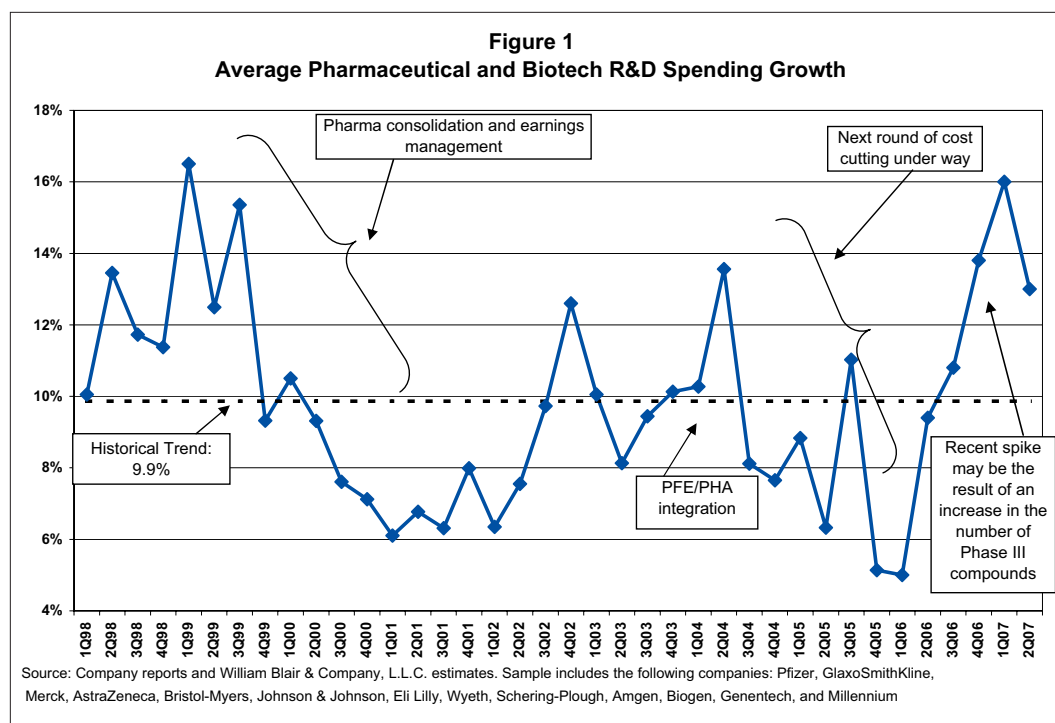
**Table 1**  
**Summary of Four Leading Indicators**

<b>Leading Indicator:</b>	<b>Trend:</b>
R&D Spending Growth	Turning Positive
Compound Growth	Increasingly Positive for Later Stage Neutral for Early Stage
Biotechnology Funding	Positive
New Business Trends	Very Positive

Source: William Blair & Company, L.L.C. estimates

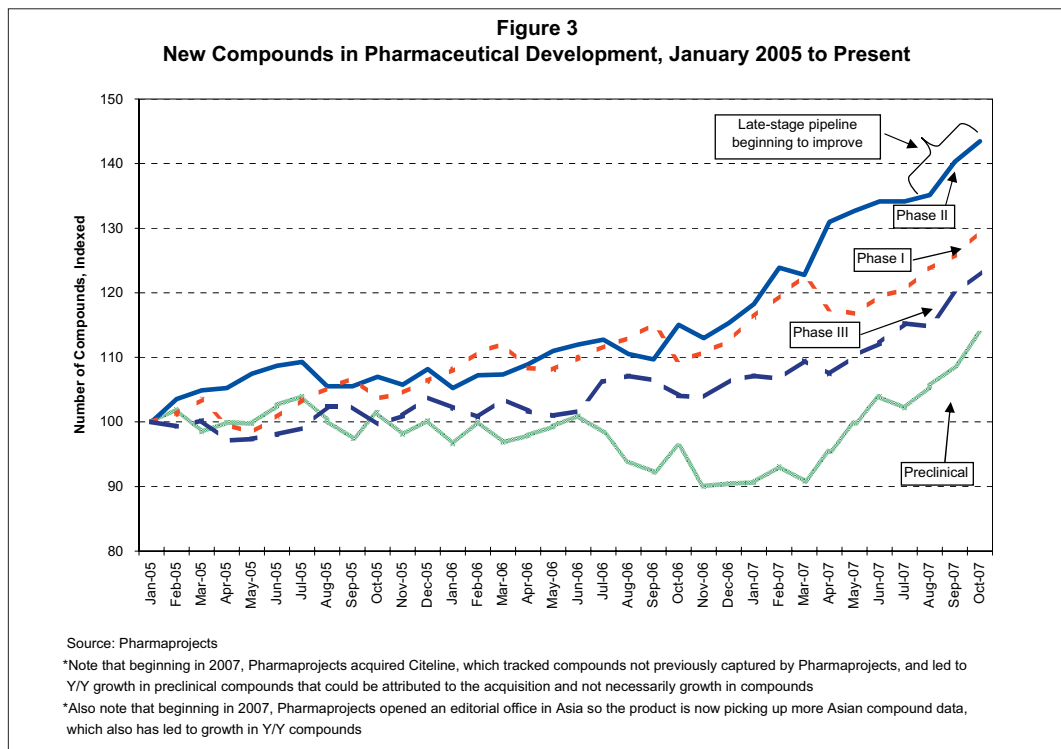
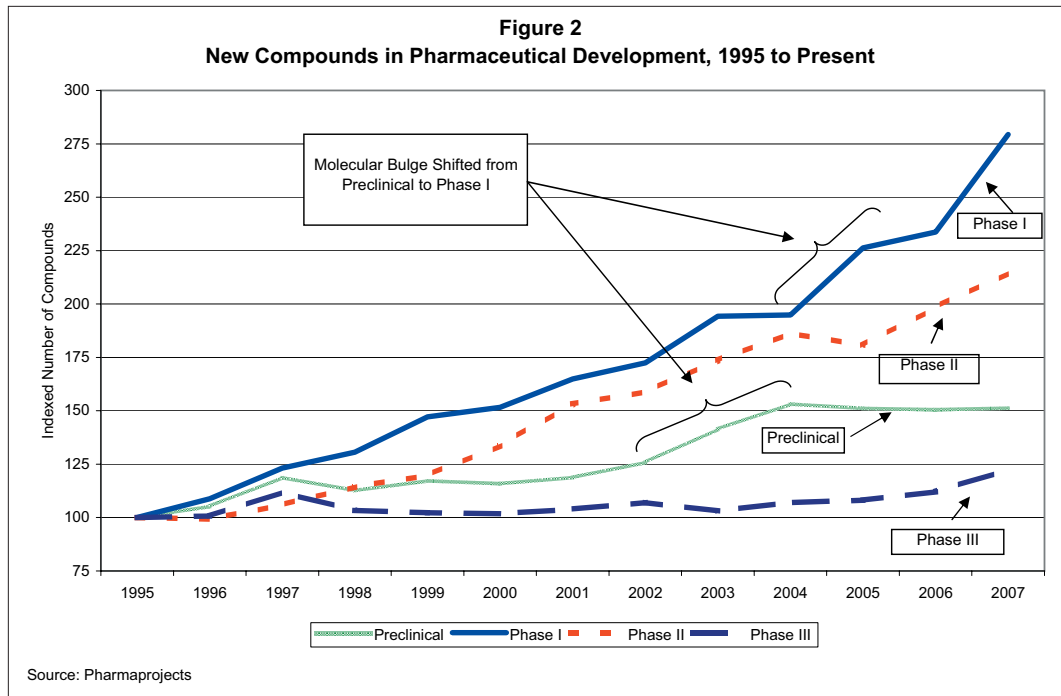
### 1) R&D Spending Growth

R&D spending growth by pharmaceutical and biotechnology companies is a measure and predictor of the clinical CRO market that we track each quarter. Clinical trials are so large and constitute such a large portion of drug companies' R&D budgets that as sponsors conduct more trials and spend more on each one (on average), overall R&D spending increases and business opportunities for CROs increase. The health of pharma and biotech companies, and particularly their research budgets, is crucial because that is the source of funding for clinical CROs. We believe tracking R&D growth helps reveal where the industry is in the R&D cycle (i.e., expansion, plateau, contraction, or trough) and this metric can help point to the next stage of the R&D cycle. As figure 1, on the following page, indicates, R&D spending has seen surprisingly strong growth over the past three quarters, well above the historical average of 9.9%, following a slowdown in 2004 to 2005. Specifically, R&D growth was 13.8% in fourth quarter 2006, 16.0% in first quarter 2007, and 13.0% in second quarter 2007. We are encouraged by this unexpected increase in R&D spending and hypothesize that recent improvement in R&D growth may be a result of the recent growth in Phase III compounds (discussed more below). *We score the R&D spending leading indicator as turning positive.*



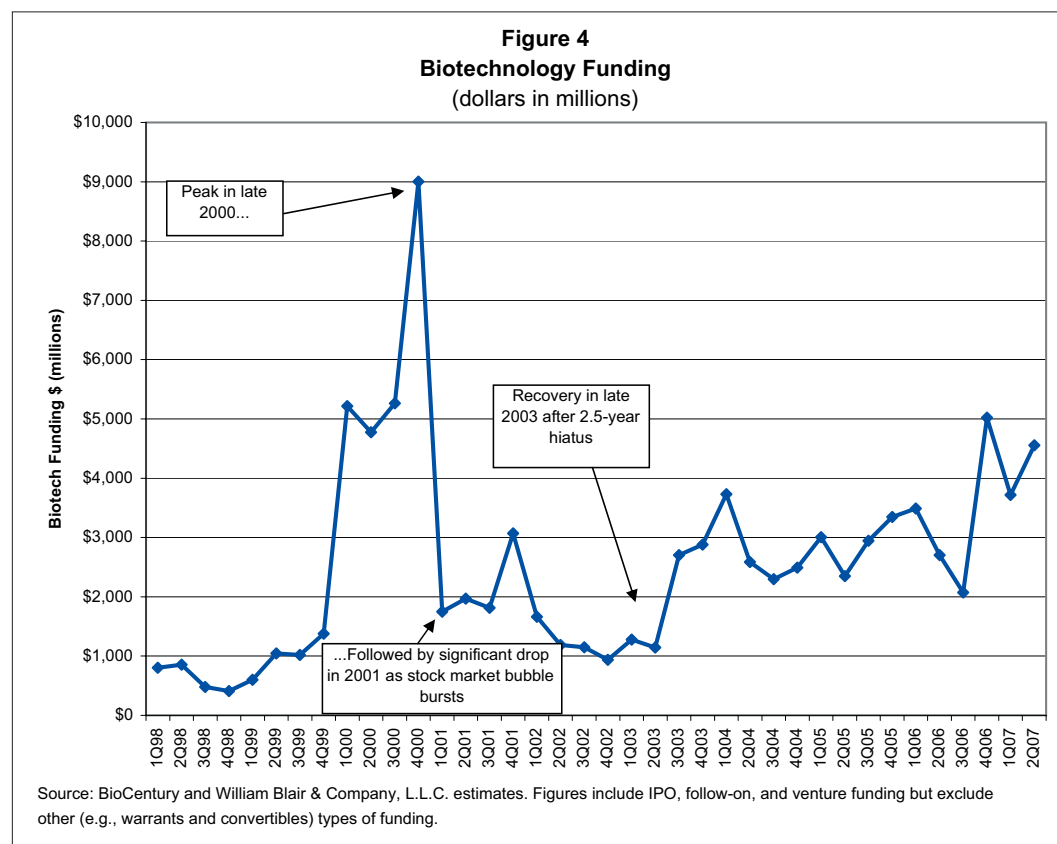
## 2) Compound Growth

Productivity of drug manufacturers' R&D is an important issue that affects the health of the clinical CRO industry. Productivity is key for supplying R&D pipelines with compounds to develop (and crucial in the long run for generating revenues to fund further R&D). Manufacturers' discovery units need to generate a steady stream of compounds (or in-license compounds) to keep the company growing and offset generic erosion. Too few compounds or compounds that fail during testing are threats to the growth of drug companies and the CRO industry. Figures 2 and 3 illustrate the growth in compounds in various phases of testing. Figure 2 shows the data from 1995, and figure 3 shows more recent monthly data. Similar to the results we gathered from last year's survey, the data continues to support comments we have heard from the field that Phase I business is robust and Phases II and III are picking up. We believe an acceleration in later-stage clinical has likely begun, based on new business trends since third quarter 2005 (discussed above) and the growth in late-stage compounds in recent months. Pure-play clinical outsourcing companies are an excellent vehicle to play a recovery in the biopharmaceutical industry's later-stage product pipeline, in our opinion. *We score the compound growth leading indicator as increasingly positive for later-stage CROs and neutral for early-stage/preclinical CROs.*



### 3) Biotechnology Funding

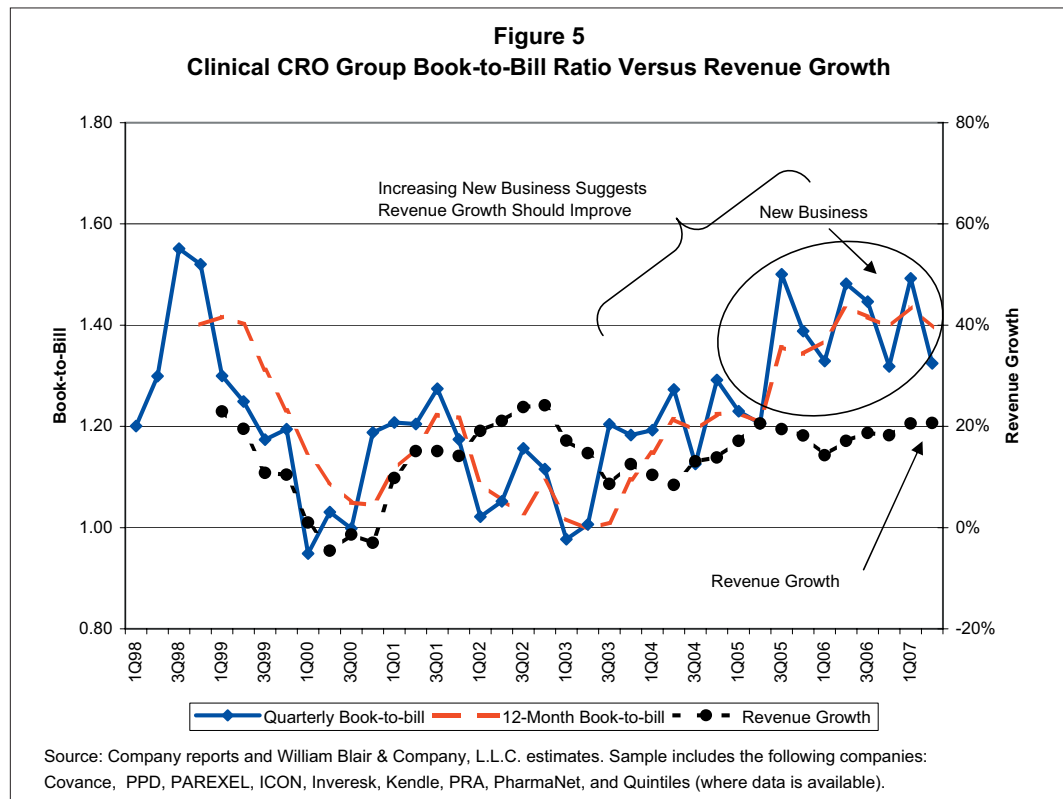
We believe the R&D dollars of biotechnology companies are becoming a greater portion of the overall mix of R&D spending, as biological compounds become an increasing portion of the total industry pipeline. We also maintain that biotech companies generally outsource a greater portion of their development spending given a lack of internal expertise and infrastructure and more limited financial resources. We believe one of the largest risks to demand (especially for early-stage services) is a reduction in funding for the biotechnology and emerging pharmaceutical markets (perhaps because of drug-pricing regulations under a new presidential administration). Therefore, we believe biotech funding is an important indicator for the future health of the CRO industry. As figure 4 indicates, biotech funding in the second quarter was roughly \$4.6 billion and has been bouncing between \$2.0 billion and \$5.0 billion per quarter since the beginning of 2006. *We score the biotechnology flow-of-funds indicator as positive and stable.*



### 4) New Business Trends

Quarterly net new business is the most important leading indicator we track for clinically focused CROs (it is less relevant for early-stage-focused vendors given the shorter duration of most preclinical and Phase I studies). We define net new business as all of the business won by a CRO during a quarter less that quarter's cancellations of business previously won. Individual clinical studies generally take one to three years, so net new business should indicate revenues to be recognized during that same period (shifted by three to six months for initial ramp-up). To forecast roughly one-year forward CRO revenue growth, we look at the book-to-bill ratio, which divides the quarter's net new business by the quarter's revenue. Book-to-bill ratios greater than 1.0 suggest the CRO is winning new business, over and above current-period revenues. A sustained book-to-bill ratio of 1.15-1.20 times suggests revenue should grow 15%-20%, for example (assuming the duration of contracts being won is stable).

Figure 5 shows that there is a good correlation between the quarterly book-to-bill ratio and subsequent quarterly year-over-year revenue growth for clinical CROs. However, the book-to-bill data is more volatile than the revenue growth, so we often look at the 12-month moving average book-to-bill ratio to forecast near-term revenue growth. In figure 5, we use data, where available, from Covance, ICON, PPD, PAREXEL, Kendle, Inveresk, PRA, PharmaNet, and Quintiles to form the clinical CRO group. The weighted average book-to-bill ratio for this group of CROs in the second quarter was 1.32 times. The 12-month-rolling book-to-bill was 1.40 times. Second quarter's new business metrics are slightly below last year's level of 1.44 times (rolling 12 months), but above the rolling-12-months' book-to-bill two years ago of 1.21 times. We believe bookings, particularly for later-stage development, should remain strong as the large number of early-stage molecules shift into later-stage trials. (The dollars spent on any given compound increase several-fold as it moves from early- to late-stage studies.) While below last year's level, the data continues to be positive, in our opinion, and is indicative of accelerating revenue growth in the coming one to two years, which should lead to improved margins as well. Table 2 and figure 6, on the following page, show the book-to-bill ratios for the individual CROs. *We score the rolling-12-months' bookings indicator as very positive for clinical CROs, despite the recent deceleration.*

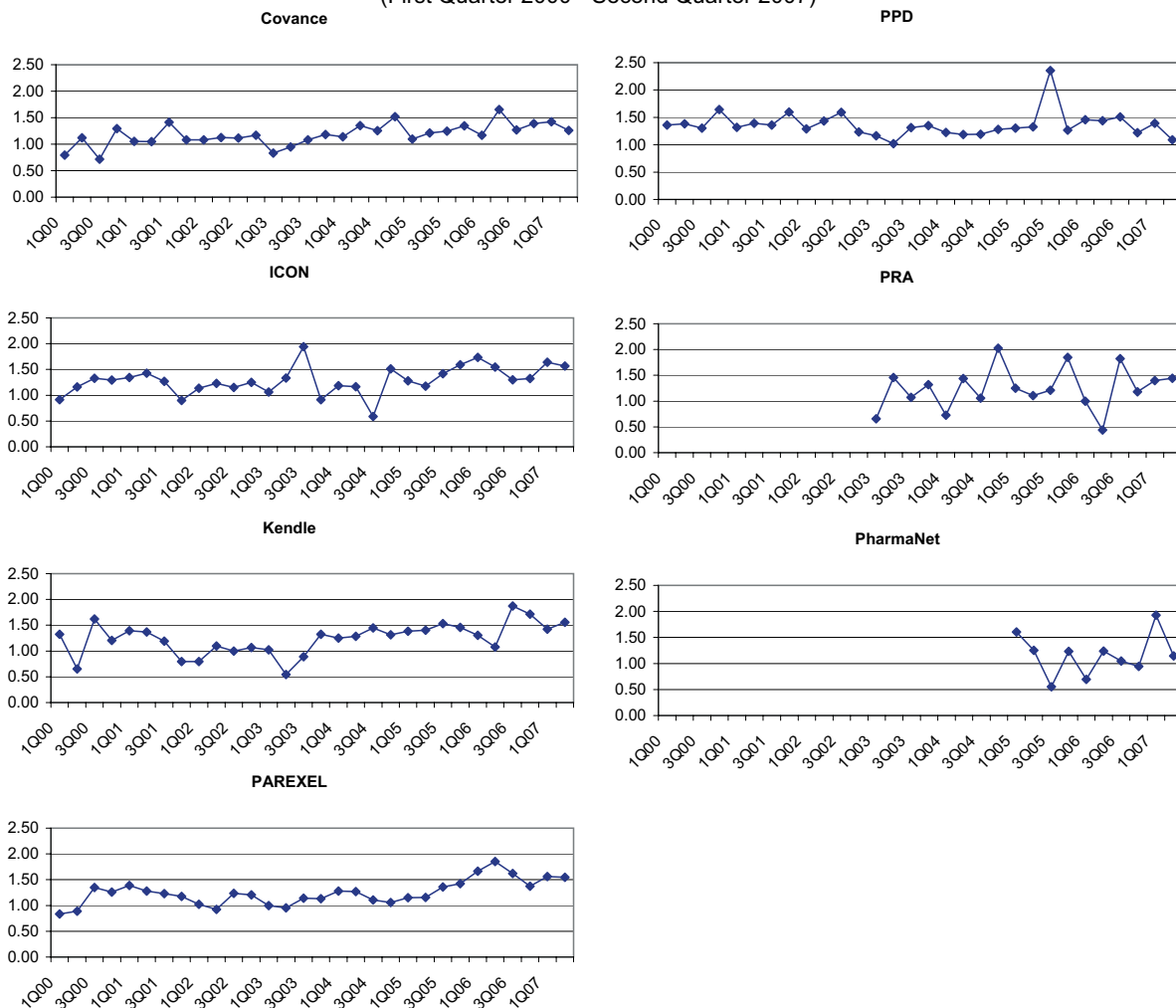


**Table 2**  
**Clinical CRO Group Book-to-bill Ratio**

	1Q05	2Q05	3Q05	4Q05	1Q06	2Q06	3Q06	4Q06	1Q07	2Q07
Covance	1.10	1.21	1.25	1.35	1.17	1.66	1.27	1.39	1.42	1.26
ICON	1.28	1.17	1.42	1.59	1.74	1.55	1.30	1.33	1.64	1.56
Kendle	1.38	1.40	1.53	1.46	1.31	1.08	1.87	1.71	1.42	1.55
PAREXEL	1.15	1.15	1.36	1.42	1.66	1.85	1.62	1.37	1.56	1.55
PPD	1.31	1.33	2.36	1.26	1.46	1.44	1.51	1.22	1.39	1.09
PRA	1.25	1.11	1.21	1.85	1.00	0.44	1.82	1.18	1.40	1.44
PDGI	1.60	1.25	0.55	1.23	0.69	1.24	1.05	0.95	1.93	1.15
<b>Weighted Average</b>	<b>1.23</b>	<b>1.21</b>	<b>1.50</b>	<b>1.39</b>	<b>1.33</b>	<b>1.48</b>	<b>1.45</b>	<b>1.32</b>	<b>1.49</b>	<b>1.32</b>

Source: Company reports and William Blair & Company, L.L.C. estimates.

**Figure 6**  
**Clinical CRO Book-to-Bill Ratios**  
(First Quarter 2000 - Second Quarter 2007)



Source: Company reports and William Blair & Company, L.L.C. estimates

## CRO Quality Survey

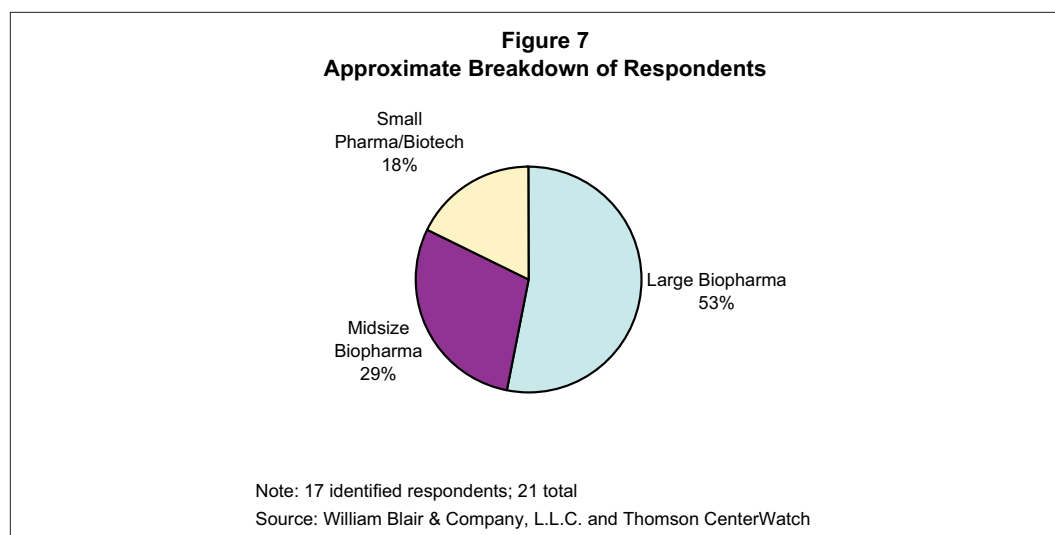
The majority of CRO stock performance, in our opinion, is driven by macro factors that affect all CRO industry participants. As a result, we spend the majority of our time tracking the four leading indicators discussed above—biopharmaceutical R&D spending growth, the biopharmaceutical industry's product pipeline, biotech funding, and new business awards in the sector. That said, there are times where market share swings have played a major role in earnings and stock price performance. For example, if we look back to the CRO market slowdown of 1999, essentially every CRO stock withered as investors ratcheted their expectations lower. However, the recovery from the trough of 1999 was markedly different across these companies, as management teams responded differently to the challenging times.

To illustrate, if we compare PPD with PAREXEL (two companies that focus predominantly on later-stage development services) from their October 1999 lows to today, PPD has increased 1,326% (through September 12, 2007), or 39% annually. PAREXEL has increased a respectable but much lower 258% over the same period, for an average annual gain of 17%. Comparing either of these companies with Quintiles yields an even starker contrast, as Quintiles declined 23% from October 1999 until its management buyout in September 2003, for an average annual loss of 6%. In our view, these substantial differences clearly point to market share gains by PPD (relative to PAREXEL and Quintiles), which in turn were likely driven by superior execution and perceived quality.

The key question is, what happens over the next five years? This question led us to conduct our third CRO quality survey. We walk through the results of the small survey below, but first we summarize our conclusions.

- ICON reclaimed its position as most frequently mentioned favorite CRO vendor. (PPD was mentioned most frequently last year, while ICON was mentioned most frequently in our first CRO survey.) ICON's No. 1 position is consistent with our perception that ICON is consistently among the best in terms of quality. Interestingly, so far in the first half of 2007, ICON also has the highest average quarterly book-to-bill ratio of the CROs that we track, suggesting it is likely gaining share.
- Thirty-four different CROs were mentioned in total (down from 40 CROs mentioned last year), illustrating the significant fragmentation of this sector. This tells us there remains plenty of market share to win if a company can clearly differentiate itself on quality.
- From a macro perspective, 62% of the responders said they expected outsourcing to increase in the next two years, down slightly from 66% last year. In addition, like last year, only one respondent expects a decline.
- Ninety percent of responders said that price was increasing (up from 70% last year), with only two responders indicating price was staying the same, and no one responding that price is expected to decline. This should bode well for industry margins and is consistent with a strong demand environment, in our view.

To elaborate on the details of our findings, we conducted a small survey earlier this year in conjunction with Thomson CenterWatch to assess the perceived quality of CROs. We stress the term *small*, with 21 responses received. As figure 7, on the following page, illustrates, roughly 53% of respondents were in the category of large biopharmaceutical, with the other 47% consisting of small and midsize and biopharmaceutical companies.



While the sample size is small, we note the following:

- We limited our responses to one per company to limit the ability of the views of one manufacturer to skew the results.
- Considering the vast majority of R&D spending and outsourcing comes from the top 50 pharma and biotech companies, 21 responses suggest a respectable capture rate of 42%.
- We continue to be surprised with the resistance of pharma and biotech companies to participate in such surveys, despite their vested interest in the results. The reluctance, we believe, stems from 1) a view that development strategy and vendors is proprietary and 2) a desire to avoid confrontation with vendors (no one wants to go on record criticizing).
- We now have three years of survey data to compare and contrast, adding to the usefulness of results.

The survey had 11 questions, as listed in table 3:

**Table 3**  
**Survey Questions**

1. Rank the five CRO vendors you most prefer working with based on quality.
2. What is your metric for defining a quality CRO based on question No. 1?
3. What are the three "full-service" vendors that you most prefer working with and why?
4. Is it important for your CRO to be global and why?
5. What is the niche CRO vendor that you most prefer working with and why?
6. Which CRO vendor has shown the most improvement over last year?
7. Which CRO vendor has shown the most deterioration over the last year?
8. Do you expect your level of outsourcing will increase, decrease, or remain the same over the next two years?
9. In terms of pricing among the CRO community, are you seeing overall pricing, net of any discounts, as increasing or decreasing? Are you seeing new pricing models emerge?
10. If the CRO market consolidated into just six CROs, would sponsors benefit and why?
11. In light of the FDA's increased focus on safety, do you expect your postmarketing surveillance (Phase IV) activity to increase in the next two years?

Source: William Blair & Company, L.L.C. and Thomson CenterWatch

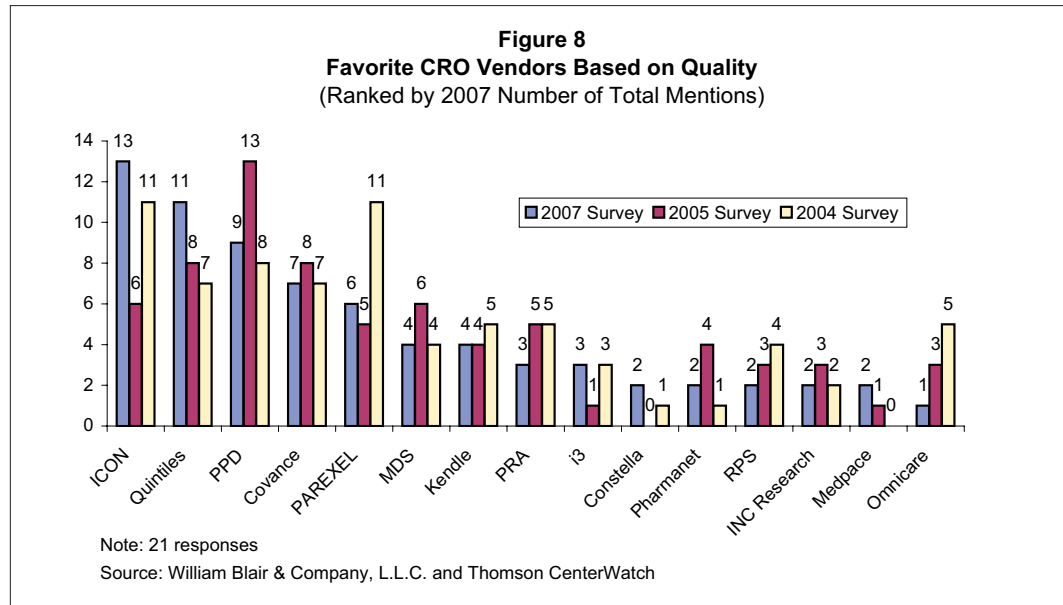
**Question 1: Rank the Five (5) CRO Vendors You Most Prefer Working With Based on Quality**

**Table 4**  
**Question No. 1 Responses**  
List order based on total mentions  
Number of respondents = 21

	Number of respondents assigning rank:				Total Mentions
	1st Place	2nd Place	3rd Place	4th - 5th	
ICON	4	1	4	4	13
Quintiles	6	2	1	2	11
PPD	4	2		3	9
Covance		4	1	2	7
PAREXEL	2	2		2	6
MDS			1	3	4
Kendle		2	1	1	4
PRA		1	1	1	3
i3			2	1	3
Constella			1	1	2
Pharmanet				2	2
RPS		1	1		2
INC Research		1	1		2
Medpace		2			2
Omnicare				1	1

Other CROs receiving 1 mention from respondents:  
Advance Biologics, Applied Clinical Intelligence, AKP, CEDRA Labs, CDR, CRM, DATAMAP, Essential, Focus, LKF, Metronomia, NCRL, Paragon Biomedical, PharmaLink FHI, Pharm-Olam, PSI, Research Point, S&P Pharmatest, TKL

Source: William Blair & Company, L.L.C. and Thomson CenterWatch



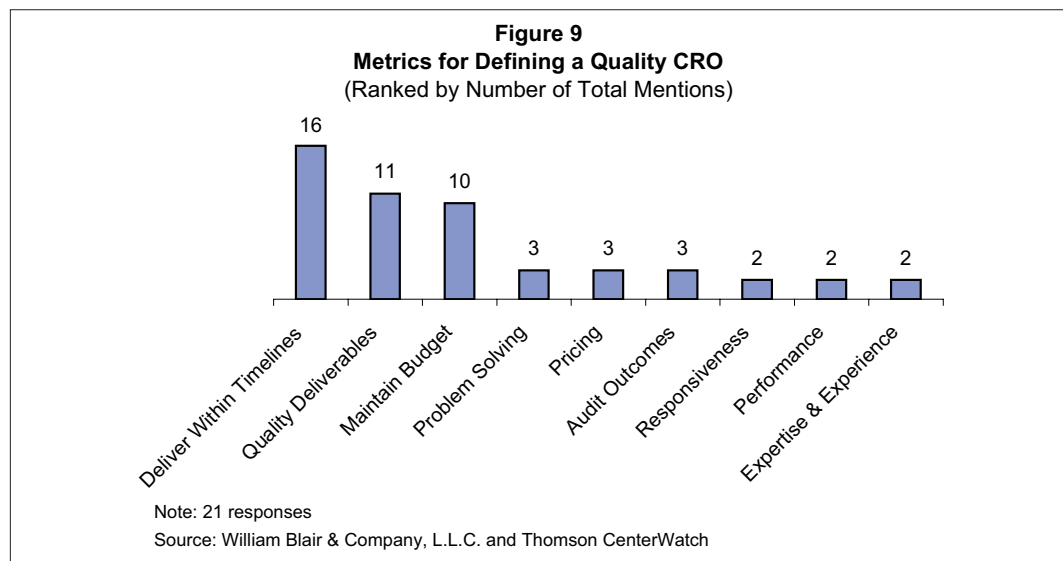
**Comments/Conclusions for Question 1**

The companies that we perceive to have the highest-quality services tended to be in line with survey results. Over the three years we have conducted this survey, ICON, Quintiles, and PPD have consistently been among the top four CROs in terms of quality. We believe that strength in book-to-bill ratio is a fairly accurate and timely predictor of perceived quality on the part of clients. As such, it is not surprising that ICON received the highest number of top-quality mentions, given its leading 2007 new business statistics discussed previously in this report.

We were more surprised by the following.

- Quintiles appears to be steadily regaining its leading reputation that it had in the 1990s but lost in the late 1990s and early part of this decade.
- PPD fell slightly from a strong first in last year's survey, although the number of first-place votes PPD received (4) was second only to Quintiles and the same as ICON.
- MDS continues to show up on the list despite its focus on early development and quality problems in bioanalytical testing.
- Thirty-four companies were mentioned at least once as a top-five favorite CRO, underscoring just how fragmented this market remains.
- RPS and Omnicare continue to decline in the number of mentions received, perhaps indicating a shift away from functional service providers and/or growing pains.

**Question 2: What Is Your Metric for Defining a Quality CRO Based on Question 1?**



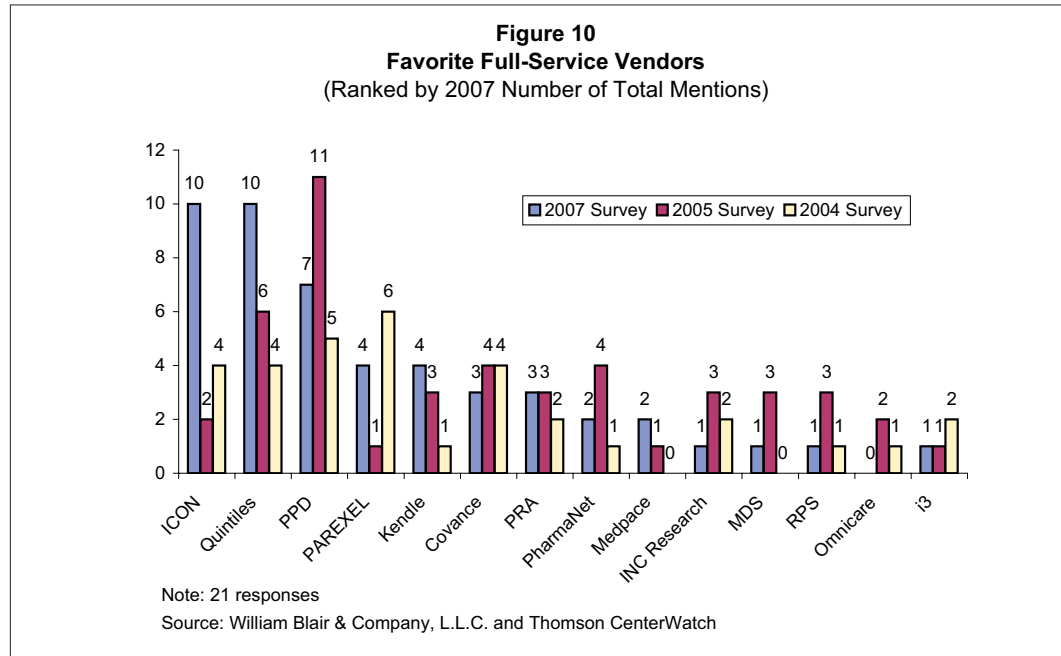
**Other metrics mentioned for defining a quality CRO**

- Clearly defined objectives
- Easy to work with
- Flexibility
- Low staff turnover
- Minimal change orders
- Minimal supervision needed
- Proactiveness
- Responsibility and quality of people

**Comments/Conclusions for Question 2**

As the CRO business is really about project management, there were no real surprises here, in our opinion. Consistent with our 2005 and 2004 surveys, the top 2 responses were “Deliver Within Timelines” and “Quality Deliverables.” It appears that as long as the CRO completes the study on time with clean data, the client will usually be happy. Price continues to be cited much less frequently than timelines and quality, countering the view of industry skeptics that pharma outsourcing is a commodity.

**Question 3: What Are the Three “Full Service” Vendors That You Most Prefer Working With and Why?**



**Other CROs receiving 1 mention in 2007:** Worldwide Clinical Research, Advanced Biologics, Focus, Constella.

**Responses for why vendors prefer working with the aforementioned “full-service” vendors:**

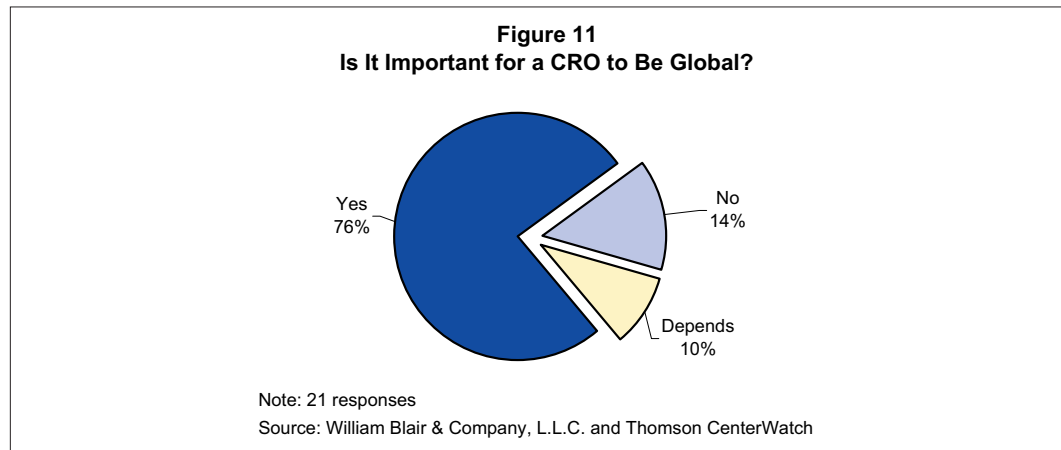
- Timely delivery
- Flexibility
- Quality (which varies more at the project manager level than the CRO level)
- Long-standing relationship
- Understanding the sponsor’s processes
- Global reach
- Expertise in specific therapeutic areas

**Comments/Conclusions for Question 3**

Most industry observers (such as ourselves) would quantify the total number of global, full-service CROs at about 10. It is therefore interesting that respondents cited 17 different companies as top three full-service CROs.

Similar to question No. 1, ICON and Quintiles again dominate this question, followed by PPD. ICON showed a very strong improvement this year, while we were somewhat surprised to see Covance slip down the list from third last year to sixth this year. PAREXEL showed marked improvement from its 2005 results, which correlates with the company’s strong new business wins and corresponding revenue growth over the past year. Kendle is also getting more recognition as a favorite full-service player, suggesting its purchase of Charles River’s clinical assets may be paying off.

**Question 4: Is It Important for Your CRO to Be Global and Why?**



***Why Global Is Important:***

- Global companies require global CRO capabilities
- Working with a single vendor rather than several is favorable
- Companies without global expertise rely on the CRO for global knowledge of regulatory environments
- Generate worldwide data for submissions
- Easier access to patients
- Many studies are international and moving outside the United States
- Need to work where local affiliates are located

***Why Global Is Not Important:***

- Depends on the project requirements
- Sometimes favorable to have more than one CRO to handle distinct parts of the trial
- If study is not global there is no reason for a global CRO (i.e., not critical if most studies are U.S.-based)
- Desire for the best quality in each region

***Comments/Conclusions for Question 4***

Seventy-six percent of respondents said it is important for a CRO to be global and 86% said it is important at least for certain trials. This year's results are generally consistent with the 2005 survey results in which 72% of respondents said it was important for a CRO to be global and 86% said it was important at least for certain trials.

We are not surprised by these findings given our view that the full-service global CROs have an advantage over smaller, more narrowly focused peers. The commentary about "why" further illustrates the trend of drug development shifting beyond the United States. Sponsors find it necessary for vendors to have offices where the sponsor may not, offering better patient access and reducing time and expenses. We believe CRO industry growth will increasingly come from developing regions such as Eastern Europe, South America, and the Pacific Rim.

**Question 5: What Is the Niche CRO Vendor That You Most Prefer Working With and Why?**

**Table 5**  
**Question No. 5 Responses**  
 List Order Based on 2007 Mentions

	2007	2005	2004
S&P Pharmatest	2	-	-
Advanced Biologics	1	-	-
AKP	1	-	-
Applied Clinical Technologies	1	1	-
Clinstar	1	-	1
Constella	1	-	-
Datamap	1	-	-
DxS	1	-	-
Focus	1	-	-
NCRL	1	-	-
PharmaLink FHI	1	-	-
Pharm-Olam	1	-	-
PRA (PBR)	1	1	1
PSI	1	-	-
RPS	1	1	4
ZEG	1	-	-
AMS	-	1	-
Aptuit (formerly part of Quintiles)	-	1	-
CRA America	-	1	-
Falcon	-	1	-
Gentiae	-	1	-
L-3	-	1	1
Latin Trials	-	1	-
Medpace	-	1	-
PharmaScope (Serbia)	-	1	-
QDS	-	1	-
RHO	-	1	1
Scope	-	1	-
Summit Management	-	1	1
Covance	-	-	2
ICON	-	-	2
INC Research	-	-	2
Inveresk/Charles River	-	-	2
MDS	-	-	2
Acurian	-	-	1
Bioluming	-	-	1
Biokinetic Clinical	-	-	1
CEDRA	-	-	1
CEREP	-	-	1
Chiltern	-	-	1
ClinPro/DZA	-	-	1
Huntingdon Life Sciences	-	-	1
Integrium	-	-	1
JBA Research	-	-	1
JMG Clinical Resources	-	-	1
Mayo Clinical Labs	-	-	1
Medinet	-	-	1
Omnicare	-	-	1
Perceptives	-	-	1
Pharmaceutical Information Association	-	-	1
PharmaNet	-	-	1

Note: 15 responses

Source: William Blair & Company, L.L.C. and Thomson CenterWatch

**Responses for why vendors prefer working with the aforementioned “niche” vendors:**

- Expertise in particular geographic regions
- Experience
- Reliability
- Performance results and quality

**Comments/Conclusions for Question 5**

Niche providers tend to have a specific area or geographic region of expertise (i.e., data entry, monitoring, investigator meeting planners), and we found it interesting that only one niche CRO was mentioned more than once (S&P Pharmatest). The vast number of niche CROs mentioned in the past three surveys illustrates the fragmentation of the CRO industry. Anecdotal feedback about niche CROs is typically positive—and it was again in this survey. However, nearly 30% of respondents indicated no experience with niche vendors, suggesting that share continues to move to the larger, top-tier players. It is also interesting that there is very little overlap in niche CRO providers across the past three years, perhaps suggesting repeat business among niche CROs is less prominent than we see for the full-service CROs.

**Question 6: Which CRO Vendor Has Shown the Most Improvement Over Last Year?**

	<b>2007</b>	<b>2005</b>	<b>2004</b>
Kendle	4	1	-
PAREXEL	3	1	2
ICON	2	-	3
PRA	2	1	-
Quintiles	2	2	-
PPD	1	1	2
INC Research	1	-	-
i3	1	1	1
Pharmanet	-	2	-
Averion	-	1	-
Covance	-	1	-
MDS	-	1	1
Omnicare	-	1	-
RPS	-	1	-

Note: 16 responses  
Source: William Blair & Company, L.L.C. and Thomson CenterWatch

**Comments include:**

- Kendle respondents noted the acquisition of Charles River/Inveresk’s clinical assets as improving the company’s global reach.
- PRA respondents noted a strong relationship management program and improved project managers.

**Comments/Conclusions for Question 6**

Respondents typically cited a major CRO as showing the most improvement over last year, and most did not provide additional comments. We are encouraged to see PAREXEL high on this list after several years of subpar execution. PAREXEL’s new business trends have increased, which would suggest that clients are increasingly comfortable with the quality improvements the company has made over the last several years. We were also given another year’s worth of evidence that Quintiles continues to be focused on strong execution and quality has likely improved as a result.

**Question 7: Which CRO (If Any) Has Shown the Most Deterioration Over the Last Year According to Your Definition of Quality From Question 1?**

**Table 7**  
**Question No. 7 Responses**  
List Order Based on 2007 Mentions

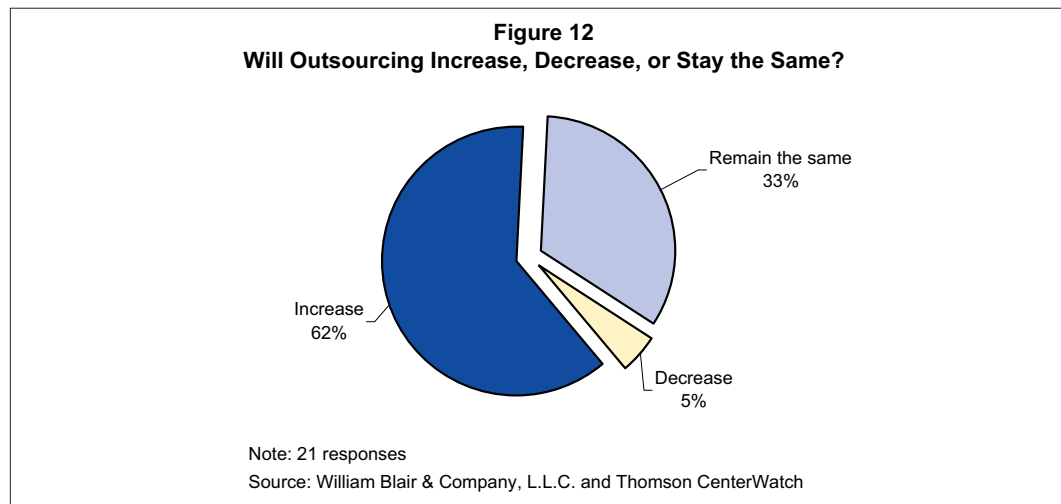
	2007	2005	2004
PAREXEL	3	2	2
Quintiles	2	3	2
Covance	2	2	1
Pharmanet	2	1	-
Omnicare	2	-	1
PPD	1	2	4
ICON	-	2	-
INC Research	-	1	-

Note: 17 responses  
Source: William Blair & Company, L.L.C. and Thomson CenterWatch

**Comments/Conclusions for Question 7**

This is the question many people in pharma do not want to answer—at least in publication (although we suspect each has at least a few horror stories to recount). Surprisingly, PAREXEL scored among the highest in both the “most improved” and “greatest deterioration.” Of note, only ICON among the major CROs was mentioned as showing improvement, but *not* mentioned as showing deterioration. We believe this likely underscores that ICON has improved the quality of its project managers, and employee-retention efforts have been relatively successful. The fact that essentially all other major CROs were cited on both lists (improving and deteriorating) underscores that in pharma outsourcing, you are only as good as your last study and that project manager quality is paramount.

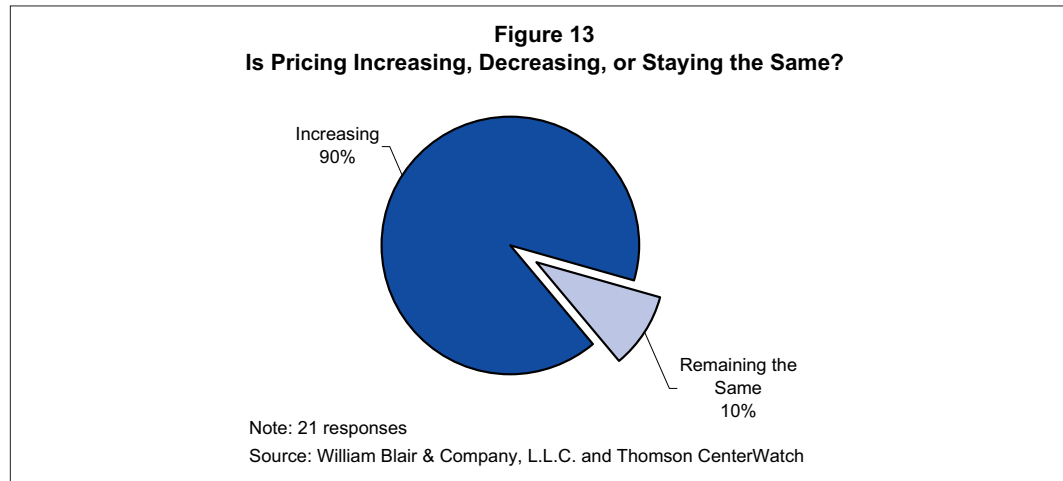
**Question 8: Do You Expect Your Level of Outsourcing Will Increase, Decrease, or Remain the Same Over the Next Two Years?**



**Comments/Conclusions for Question 8**

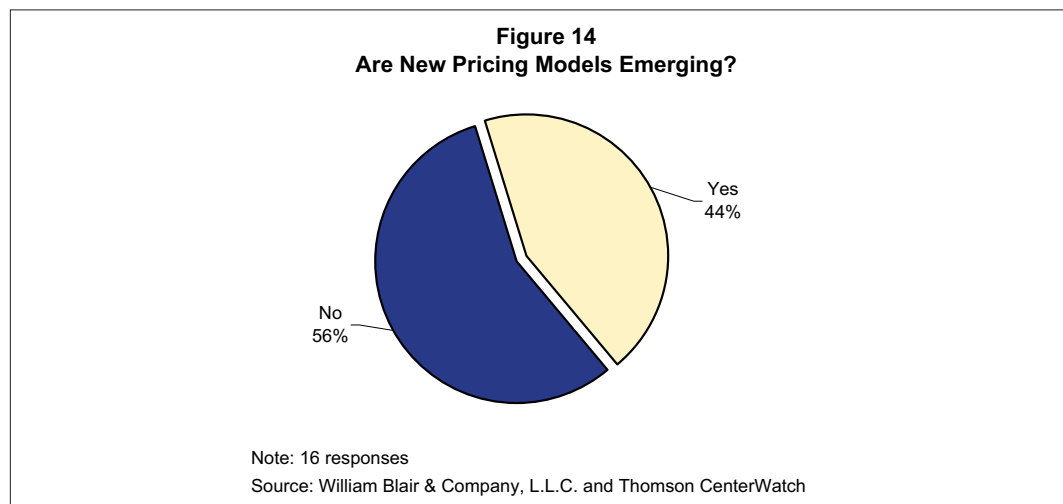
Sixty-two percent of respondents expect outsourcing to increase, down modestly from 66% in the 2005 survey, while only 5% expect it to decline (up just slightly from 4% in the 2005 survey). Among companies who expect outsourcing to increase, most expect the increase to be between 5% and 15%. We were encouraged by this feedback, and expect outsourcing percentages to keep inching up, given trials keep getting larger and more complicated, while pharma continues to limit or even reduce resources and headcount.

**Question 9: In Terms of Pricing Among the CRO Community, Are You Seeing Overall Pricing, Net of Any Discounts, as Increasing or Decreasing? Are You Seeing Any New Pricing Models Emerge?**



**Comments Regarding Pricing Trends**

- Modest price increases were cited, typically in line with inflation.



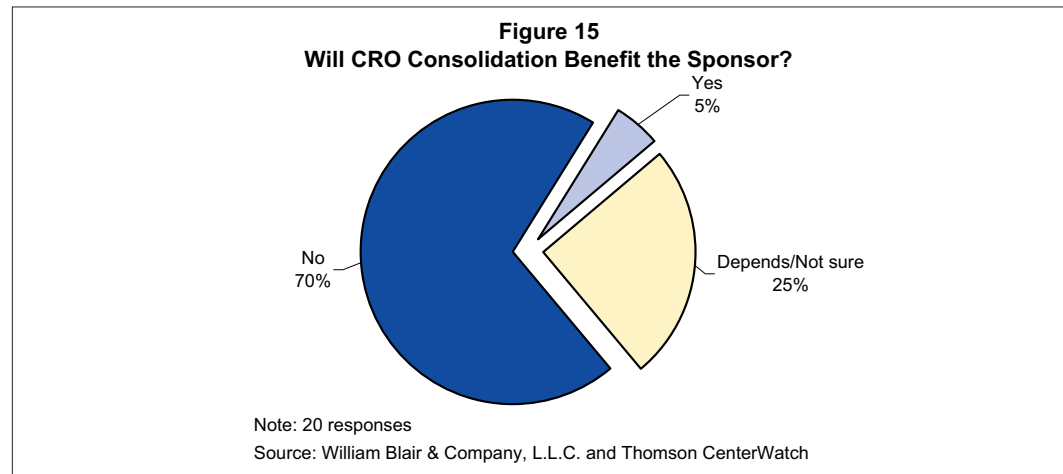
**Comments Regarding Pricing Models**

- Sponsors are driving a shift toward unit pricing, which allows them to better estimate costs up front.
- There is a migration toward a centralized start-up services model where costs are bundled for start-up.
- Sponsors have looked at “Target Pricing” models as a way to manage internal budget issues.

**Comments/Conclusions for Question 9**

Question 9’s two parts suggest that price is going up among CROs (90% said it was increasing, versus 70% in 2005), although the commentary suggests not at a rapid pace. It appears that some pharma companies are experimenting with new pricing/contracting models such as unit pricing. Unlike last year, we did not see any references to a shift to the functional outsourcing model.

**Question 10: If the CRO Market Consolidated Into Just Six CROs, Would Sponsors Benefit and Why?**



***Comments on why consolidation is good for sponsors***

- The currently fragmented process would become more consistent

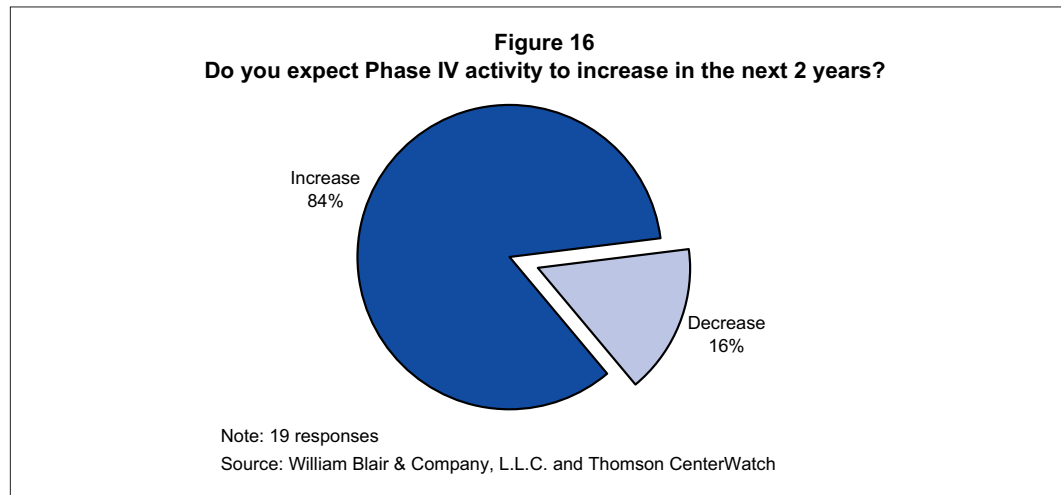
***Comments on why consolidation is bad for sponsors***

- Costs would be less competitive.
- New processes and efficiencies would come much slower, because the CROs would be under less pressure to improve performance.
- Larger CROs would become more bureaucratic, unresponsive, and arrogant.
- Niche CROs are often a better choice for certain jobs given their focus on a particular discipline.
- Lack of attention is given to smaller sponsors.

***Comments/Conclusions for Question 10***

Question 10's responses overwhelmingly indicate that sponsors prefer CRO fragmentation and will probably not move quickly (if ever) to a "prime vendor" model, where one CRO gets virtually all the business. Clearly, sponsors view CRO competition as good for pricing and performance. These answers suggest pharma prefers the "checks and balances" of many CROs to the efficiencies that could be gained by a more streamlined RFP/bid defense process with fewer vendors. Interestingly, these data conflict with the trend among large pharma to tighten their preferred vendor list to 6 CROs or fewer. Given this consistent feedback across our three surveys, we believe consolidation among leading CROs will be limited in the future.

**Question 11: In Light of the FDA's Increased Focus on Safety, Do You Expect Your Postmarketing Surveillance (Phase IV) Activity to Increase in the Next Two Years?**



**Comments include:**

- The scope and size of Phase IV work will force sponsors to outsource more.
- Some noted their companies will outsource the entire project if large, post-scale marketing trials are required.

**Comments/Conclusions for Question 11**

Given all of the news around PDUFA (prescription drug user fees) renewal legislation, 2007 was the first year that we asked this question. Consistent with our belief that PDUFA legislation has the potential to be a positive for CROs, respondents largely agreed that their Phase IV outsourcing activity is expected to increase in the next two years. On September 20, 2007, Congress passed the Food and Drug Administration Amendments Act (better known as the PDUFA renewal bill), which gives the FDA additional authority with respect to drug safety. We believe this increased emphasis on postmarketing surveillance is likely to lead to a new layer of clinical trial spending, as we do not expect biotech or pharma companies to view such Phase IV trials as a core competency. Therefore, we expect the rate of outsourcing for such work to be much higher than the estimated 20%-30% average for development spending in general.

## Summary Conclusions from Quality Survey and Leading Indicators

Fiscal 2007 continues to be a strong environment for clinically oriented CROs, with new business trends well above levels necessary to sustain long-term growth of 20% or more. Moreover, we are beginning to see the uptick in Phase II and Phase III compounds, and healthy flows of capital into biotech further bolster our view that the environment is stable to improving. We believe ICON emerges as the best operator at present, based on our survey data, but comparing last year's data with this underscores the importance of day-to-day execution, as quality perceptions can shift quickly—especially downward.

Ignoring valuation, ICON is our favorite name in the CRO space, as the company continues to perform very well, appears to be gaining the most share, and has the longer-term margin opportunity as improvements in the central lab continue and expansion into Phase I materializes. We rate ICON Outperform and view it as having the highest growth outlook among CROs over the next two to three years (table 8 is our earnings model for ICON, and figures 17 and 18 show new business and margin trends).

We also continue to recommend purchase of PPD and rate the stock Outperform, despite some apparent slippage from the strong showing in our survey from last year and weaker-than-expected second-quarter results. We believe management appointments in the past few months will likely help ease fears rising from departures earlier this year. We also believe the compound partnering portfolio is beginning to show promise as three drugs near potential approval. The company remains one of the best operators in the business, with margins well above those of any of its competitors, and we view the relative valuation as attractive—particularly in light of the \$3 per share in excess net cash and the potential upside from the product portfolio (table 9 is our earnings model for PPD, and figures 19 and 20 show new business and margin trends).

We recommend purchase of Covance, of which we recently launched coverage with an Outperform rating. We believe Covance is the most diversified and therefore lowest-risk way to invest in the CRO market, given that revenue is nearly evenly split between early- and late-stage development. The company is an established leader in preclinical development and central lab, and has strong operations in late-stage outsourcing as well. We believe ongoing margin leverage should allow for 20% longer-term earnings growth and therefore market outperformance, despite the stock's premium valuation (table 10 is our earnings model for Covance, and figures 21 and 22 show new business and margin trends).

We rate PAREXEL Market Perform and have mixed feelings on the stock. The excellent environment for clinical CROs should help PAREXEL along with all the other later-stage CROs mentioned in this report. In addition, the company is the most geographically diversified CRO in terms of revenue, with better than two-thirds derived from outside the United States, which should work to its advantage as clinical trials continue to grow overseas. Moreover, well-below-average profit margins give the company perhaps the greatest earnings upside in the group. However, we are not yet fully convinced that the company can consistently deliver—either operationally or financially—after years of fluctuations. Investors willing to tolerate this lower quarterly predictability, however, could do well with the stock, given the substantial margin opportunity and recent revenue acceleration (table 11 is our earnings model for PAREXEL, and figures 23 and 24 show new business and margin trends).

We rate PRA a Market Perform pending its acquisition by Genstar for \$30.50 (announced July 25, 2007). Survey data suggest PRA may still be a bit of a well-kept secret in the industry (similar to ICON in past years), although we like the company's strategic focus on biotech and complex therapeutic areas such as oncology, which should lead to above-average revenue growth and margins longer term. In addition, two key management hires from PPD (Colin Shannon and Linda Baddour) should help improve the company operationally (table 12 is our earnings model for PRA, and figures 25 and 26 show new business and margin trends).

**Table 8**  
**ICON plc**  
**Earnings Model**  
(\$ in thousands, except per share data)

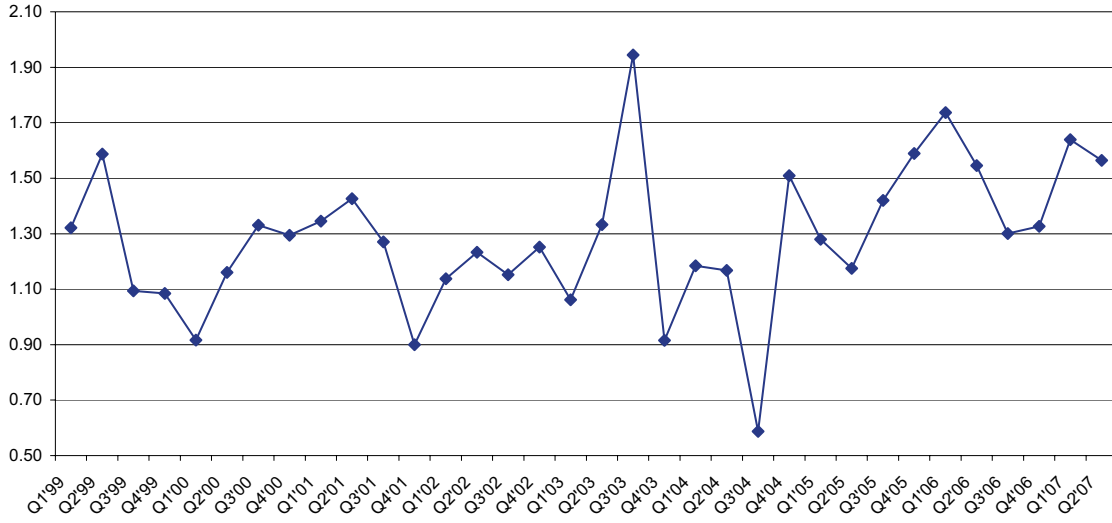
Fiscal year ends May 31	12 months Nov 04 E	12 months Nov 05	2006	March Q1'07	June Q2'07	Sep Q3'07E	Dec Q4'07E	2007E	2008E
<b>Net revenue</b>	<b>\$312,615</b>	<b>\$342,817</b>	<b>\$455,597</b>	<b>\$136,089</b>	<b>\$147,047</b>	<b>\$150,376</b>	<b>\$161,176</b>	<b>\$594,688</b>	<b>\$715,742</b>
Direct costs	170,917	189,568	255,751	78,557	83,875	85,113	90,742	338,287	398,969
Gross Profit	141,698	153,249	199,846	57,532	63,172	65,263	70,434	256,401	316,773
SG&A (incl. options beg Q106)	94,600	108,558	137,081	38,684	42,662	43,759	47,224	172,330	211,312
EBITDA	47,098	44,691	62,765	18,848	20,510	21,504	23,209	84,071	105,461
Depreciation and amortization expense	12,208	13,916	14,949	4,156	4,450	4,812	5,158	18,576	22,904
<b>Operating income</b>	<b>34,890</b>	<b>30,775</b>	<b>47,816</b>	<b>14,692</b>	<b>16,060</b>	<b>16,692</b>	<b>18,052</b>	<b>65,495</b>	<b>82,557</b>
Interest and other income (expense), net	509	1,654	3,640	1,044	1,019	432	446	2,941	1,935
Pretax income	35,399	32,429	51,456	15,736	17,079	17,124	18,497	68,436	84,492
Income tax expense	8,322	8,022	12,924	3,428	3,758	3,767	4,069	15,023	18,588
Minority Interest	80	100	228	42	6	7	7	62	31
<b>Net income (excl. nonrecurr, incl. options beg Q106)</b>	<b>26,997</b>	<b>24,307</b>	<b>38,304</b>	<b>12,266</b>	<b>13,315</b>	<b>13,350</b>	<b>14,421</b>	<b>53,352</b>	<b>65,873</b>
Nonrecurring items		(11,275)							
Tax adjustment		725							
Nonrecurring items (net of tax)		(10,550)							
(a)									
<b>Net income (incl. nonrecurring &amp; options)</b>	<b>\$26,997</b>	<b>\$13,757</b>	<b>\$38,304</b>	<b>\$12,266</b>	<b>\$13,315</b>	<b>\$13,350</b>	<b>\$14,421</b>	<b>\$53,352</b>	<b>\$65,873</b>
EPS (excl. nonrecurring items, incl. options)	<b>\$0.96</b>	<b>\$0.86</b>	<b>\$1.33</b>	<b>\$0.42</b>	<b>\$0.45</b>	<b>\$0.45</b>	<b>\$0.48</b>	<b>\$1.79</b>	<b>\$2.15</b>
EPS (as reported, incl. nonrecurring & options)	<b>\$0.96</b>	<b>\$0.49</b>	<b>\$1.33</b>	<b>\$0.42</b>	<b>\$0.45</b>	<b>\$0.45</b>	<b>\$0.48</b>	<b>\$1.79</b>	<b>\$2.15</b>
Wtd average shares outstanding (diluted, for EPS incl option)	28,162	28,295	28,857	29,509	29,685	29,885	30,085	29,791	30,585
<b>MARGIN ANALYSIS:</b>									
Gross profit	45.3%	44.7%	43.9%	42.3%	43.0%	43.4%	43.7%	43.1%	44.3%
SG&A (including options beg Q106)	30.3%	31.7%	30.1%	28.4%	29.0%	29.1%	29.3%	29.0%	29.5%
EBITDA (including options beg Q106)	15.1%	13.0%	13.8%	13.8%	13.9%	14.3%	14.4%	14.1%	14.7%
Depreciation & amortization	3.9%	4.1%	3.3%	3.1%	3.0%	3.2%	3.2%	3.1%	3.2%
Operating income (including options beg Q106)	11.2%	9.0%	10.5%	10.8%	10.9%	11.1%	11.2%	11.0%	11.5%
Tax rate (including options beg Q106)	23.5%	24.7%	25.1%	21.8%	22.0%	22.0%	22.0%	22.0%	22.0%
Net income (including options beg Q106)	8.6%	7.1%	8.4%	9.0%	9.1%	8.9%	8.9%	9.0%	9.2%
<b>GROWTH RATES:</b>									
Revenue	17%	10%	33%	38%	37%	25%	25%	31%	20%
Revenue, organic				35%	34%				
Gross profit	17%	8%	30%	30%	33%	25%	26%	28%	24%
SG&A (including options beg Q106)			26%	26%	32%	22%	24%	26%	23%
EBITDA (including options beg Q106)			40%	40%	37%	30%	31%	34%	25%
Operating income (including options beg Q106)			55%	46%	42%	32%	31%	37%	26%
Net income (excl. nonrecurring items, incl. options beg Q106)			58%	63%	43%	32%	27%	39%	23%
EPS (excl. nonrecurr items, incl options beg Q106)			55%	56%	38%	29%	24%	35%	20%
Diluted shares outstanding	10%	0%	2%	5%	3%	3%	2%	3%	3%

E=William Blair & Company, L.L.C. estimate

(a) One-time charge for central lab goodwill impairment as well as lease terminations and exit costs in the US businesses

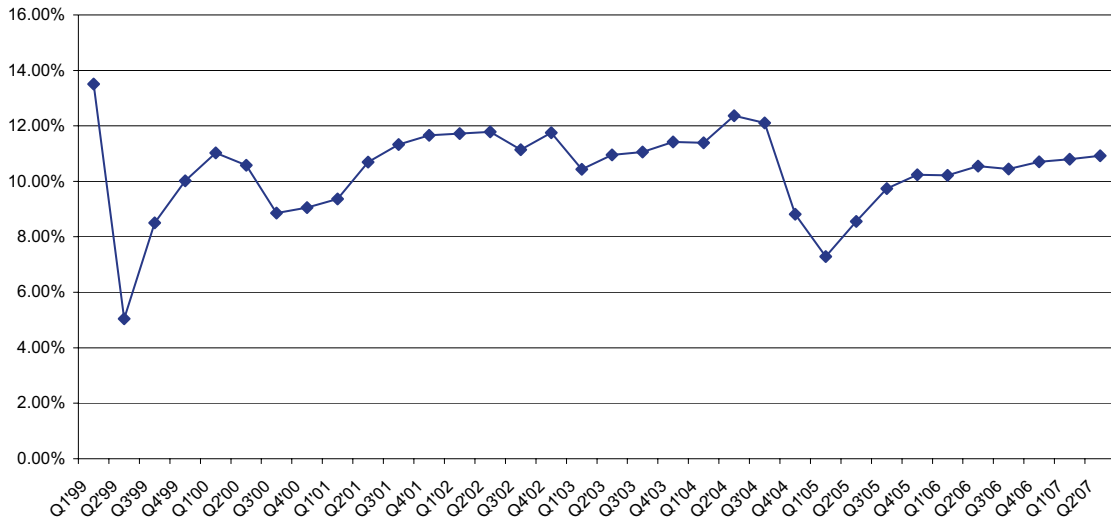
Source: Company reports and William Blair & Company, L.L.C. estimates

**Figure 17**  
**ICON plc**  
**Quarterly Book-to-Bill Ratio**  
 (Calendar Quarters, not Fiscal Quarters)



Source: Company reports

**Figure 18**  
**ICON plc**  
**Quarterly Operating Margins**  
 (Calendar Quarters, not Fiscal Quarters)



Source: Company reports

**Table 9**  
**PPD, Inc.**  
**Earnings Model**  
(\$ in thousands, except per share data)

Fiscal year ends December 31	2003	2004	2005	2006	Q1'07	Q2'07	Q3'07E	Q4'07E	2007E	2008E
Net development revenue	\$654,019	\$759,629	\$921,802	\$1,113,106	\$300,156	\$316,527	\$331,444	\$342,063	\$1,290,190	\$1,486,284
Net discovery revenue	15,479	14,311	40,214	33,193	4,383	4,500	4,679	5,500	19,062	20,968
<b>Net revenue</b>	<b>669,498</b>	<b>773,940</b>	<b>962,016</b>	<b>1,146,299</b>	<b>304,539</b>	<b>321,027</b>	<b>336,123</b>	<b>347,563</b>	<b>1,309,252</b>	<b>1,507,251</b>
Development direct costs	316,942	376,439	467,001	559,819	151,915	157,515	167,711	173,084	650,224	752,060
Discovery direct costs	7,741	5,491	8,428	9,324	2,358	2,462	2,573	3,025	10,418	10,484
Development gross profit	337,077	383,190	454,801	553,287	148,241	159,012	163,733	168,979	639,965	734,224
Discovery gross profit	7,738	8,820	31,786	23,869	2,025	2,038	2,105	2,475	8,643	10,484
<b>Total gross profit</b>	<b>344,815</b>	<b>392,010</b>	<b>486,587</b>	<b>577,156</b>	<b>150,266</b>	<b>161,050</b>	<b>165,839</b>	<b>171,454</b>	<b>648,609</b>	<b>744,708</b>
Research and development expense	9,941	15,852	23,370	5,406	1,905	3,963	7,865	8,202	21,936	9,159
Selling, general and administrative expense	166,231	196,257	251,095	302,536	75,738	82,149	88,736	90,019	336,642	376,502
EBITDA	168,643	179,901	212,122	269,214	72,623	74,938	69,237	73,233	290,031	359,048
Depreciation and amortization expense	28,601	29,854	40,250	47,738	12,586	13,843	14,494	14,987	55,910	64,617
<b>Operating income</b>	<b>140,042</b>	<b>150,047</b>	<b>171,872</b>	<b>221,476</b>	<b>60,037</b>	<b>61,095</b>	<b>54,743</b>	<b>58,246</b>	<b>234,121</b>	<b>294,430</b>
Interest and other income (expense), net	2,482	3,837	9,035	15,528	4,559	4,015	4,228	4,423	17,225	19,410
Pretax income	142,524	153,884	180,907	237,004	64,596	65,110	58,971	62,668	251,346	313,840
Income tax expense	51,499	56,177	60,775	79,360	22,609	22,463	20,050	21,307	86,430	106,706
<b>Net income (excl. nonrecurr items, incl options)</b>	<b>91,025</b>	<b>97,707</b>	<b>120,132</b>	<b>157,644</b>	<b>41,987</b>	<b>42,647</b>	<b>38,921</b>	<b>41,361</b>	<b>164,916</b>	<b>207,135</b>
<b>(options expense included beginning Q1'05)</b>										
Nonrecurring items	(71,279)	(4,039)		(1,499)						
Tax adjustment	26,564	5,220		507						
Nonrecurring items (net of tax)	(44,715)	1,181	(234)	(992)						
(k,l,m)	(n,o,p)	(q,r,s)	(t,u,v,w)							
<b>Net income</b>	<b>\$46,310</b>	<b>\$98,888</b>	<b>\$119,898</b>	<b>\$156,652</b>	<b>\$41,987</b>	<b>\$42,647</b>	<b>\$38,921</b>	<b>\$41,361</b>	<b>\$164,916</b>	<b>\$207,135</b>
EPS (excl. nonrecurring items, incl. option expense)	\$0.81	\$0.86	\$1.03	\$1.33	\$0.35	\$0.36	\$0.32	\$0.34	\$1.37	\$1.70
EPS (as reported)	\$0.41	\$0.87	\$1.03	\$1.32	\$0.35	\$0.36	\$0.32	\$0.34	\$1.37	\$1.70
EPS (estimated from discovery business)	(\$0.06)	(\$0.06)	\$0.05	\$0.05	(\$0.01)	(\$0.02)	(\$0.04)	(\$0.04)	(\$0.12)	(\$0.04)
EPS (estimated from CRO business)	\$0.87	\$0.92	\$0.99	\$1.28	\$0.36	\$0.38	\$0.37	\$0.39	\$1.50	\$1.74
Weighted average shares outstanding (diluted)	112,292	113,767	116,372	118,507	119,329	119,770	120,270	120,770	120,035	122,020
<b>MARGIN ANALYSIS:</b>										
Development gross profit	51.5%	50.4%	49.3%	49.7%	49.4%	50.2%	49.4%	49.4%	49.6%	49.4%
Discovery gross profit	50.0%	61.6%	79.0%	71.9%	46.2%	45.3%	45.0%	45.0%	45.3%	50.0%
Gross profit	51.5%	50.7%	50.6%	50.3%	49.3%	50.2%	49.3%	49.3%	49.5%	49.4%
R&D	1.5%	2.0%	2.4%	0.5%	0.6%	1.2%	2.3%	2.4%	1.7%	0.6%
SG&A (incl. options beg Q105)			26.1%	26.4%	24.9%	25.6%	26.4%	25.9%	25.7%	25.0%
EBITDA (incl. options beg Q105)			22.0%	23.5%	23.8%	23.3%	20.6%	21.1%	22.2%	23.8%
Depreciation & amortization	4.3%	3.9%	4.2%	4.2%	4.1%	4.3%	4.3%	4.3%	4.3%	4.3%
Operating income (incl options beg Q105)			17.9%	19.3%	19.7%	19.0%	16.3%	16.8%	17.9%	19.5%
Tax rate	36.1%	36.5%	33.6%	33.5%	35.0%	34.5%	34.0%	34.0%	34.4%	34.0%
Net income (incl options beg Q105)			12.5%	13.8%	13.8%	13.3%	11.6%	11.9%	12.6%	13.7%
<b>GROWTH RATES:</b>										
Development revenue	20%	16%	21%	21%	16%	13%	16%	17%	16%	15%
Discovery revenue	-12%	-8%	181%	-17%	-77%	-1%	5%	5%	-43%	10%
<b>Total revenue</b>	<b>19%</b>	<b>16%</b>	<b>24%</b>	<b>19%</b>	<b>10%</b>	<b>13%</b>	<b>16%</b>	<b>17%</b>	<b>14%</b>	<b>15%</b>
<b>Organic revenue</b>										
<b>Total gross profit</b>	<b>17%</b>	<b>14%</b>	<b>24%</b>	<b>19%</b>	<b>3%</b>	<b>14%</b>	<b>16%</b>	<b>17%</b>	<b>12%</b>	<b>15%</b>
R&D	-6%	59%	47%	-77%	180%	214%	317%	420%	306%	-58%
SG&A (incl. options beg Q105)			28%	20%	5%	4%	15%	22%	11%	12%
EBITDA (incl. options beg Q105)			18%	27%	-1%	23%	8%	3%	8%	24%
Operating income (incl options beg Q105)			15%	29%	-3%	24%	5%	0%	6%	26%
Net income (excl. nonrecurring items, incl. options beg Q105)			23%	31%	-1%	16%	6%	-1%	5%	26%
<b>EPS (excl. nonrecurring items, incl. options)</b>	<b>26%</b>	<b>6%</b>	<b>20%</b>	<b>29%</b>	<b>-2%</b>	<b>15%</b>	<b>4%</b>	<b>-2%</b>	<b>3%</b>	<b>24%</b>
EPS (CRO business)	25%	6%	7%	30%	27%	21%	14%	8%	17%	16%
Diluted shares outstanding	1%	1%	2%	2%	1%	1%	1%	2%	1%	2%

E=William Blair & Company, L.L.C. estimate

(k) Equity impairment charge of \$5.5 million, after tax, due to write down of 3 investments.

(l) Gain on sale of assets of \$5.7 million, \$1.9 million charge for restructuring of discovery business, and equity impairment charge of \$0.8 million, all pre-tax.

(m) One-time \$65m cash payment to Eli Lilly to acquire patents for Dapoxetine and \$0.7m equity impairment charge.

(n) Special items, pre-tax, of \$2.1m restructuring charge related to sublease of former chemistry building and \$2m equity investment impairment.

(o) Gain on sale of assets of \$59K

(p) Gain on sale of assets of \$17K

(q) Gain on exchange of assets related to the acquisition of SurroMed's Biomarker business (\$5.1M pretax gain)

(r) Charge of \$3.8M pretax is related to the impairment of PPD's investment in Spotlight Health

(s) Charge of \$2.1M pretax is related to the impairment of equity investments

(t) Charge of \$1.1M pretax is related to the loss on disposal of assets (some biomarker and intangible assets)

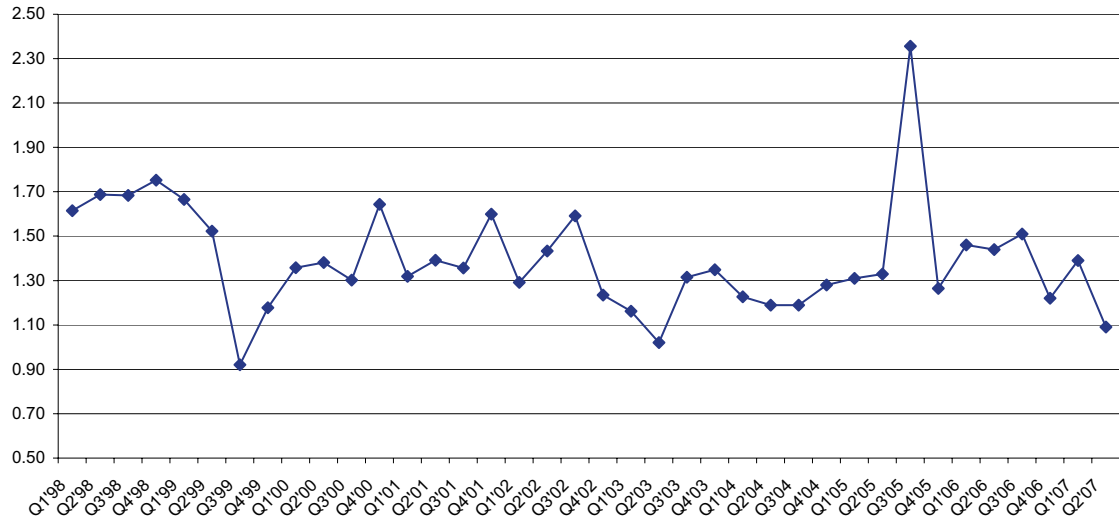
(u) Charge of \$0.375M pretax is related to the loss on disposal of assets

(v) Charge of \$0.042M pretax is related to the loss on disposal of assets

(w) Charge of \$0.071M pretax is related to the loss on disposal of assets

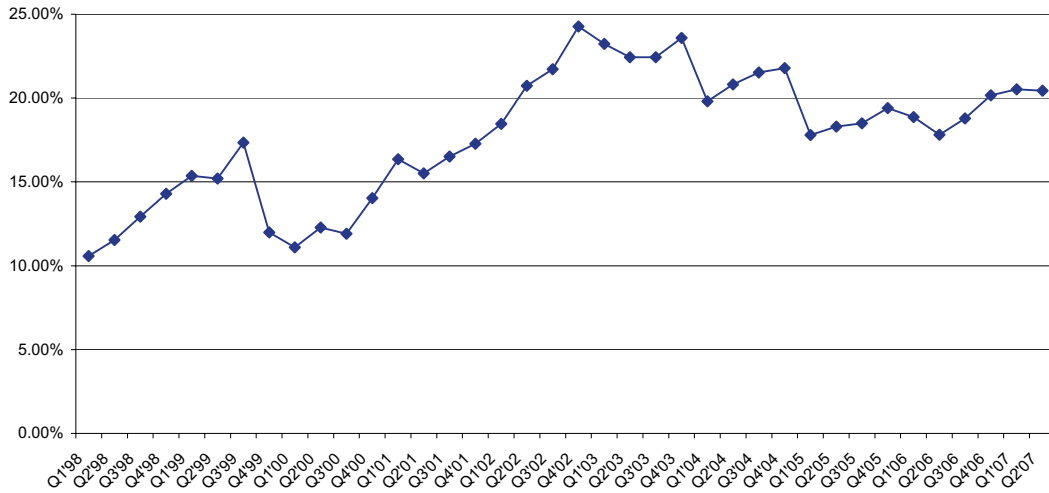
Source: Company reports and William Blair & Company, L.L.C. estimates

**Figure 19**  
**PPD, Inc.**  
**Quarterly Book-to-Bill Ratio**



Source: Company reports

**Figure 20**  
**PPD, Inc.**  
**Quarterly Operating Margins**



Source: Company reports

**Table 10**  
**Covance Inc.**  
**Earnings Model**  
(\$ in thousands, except per share data)

Fiscal year ends December 31	2004	2005	2006	Q1'07	Q2'07	Q3'07E	Q4'07E	2007E	2008E
<b>Net revenue</b>	<b>\$1,020,429</b>	<b>\$1,192,950</b>	<b>\$1,340,203</b>	<b>\$358,319</b>	<b>\$381,145</b>	<b>\$388,828</b>	<b>\$397,771</b>	<b>\$1,526,063</b>	<b>\$1,727,059</b>
Cost of revenue	677,945	791,654	882,190	234,379	251,078	253,904	258,154	997,515	1,118,966
Gross profit	342,484	401,296	458,013	123,940	130,067	134,923	139,618	528,548	608,093
Selling, general, and administrative expense	155,656	195,768	207,388	55,791	58,092	58,324	60,063	232,271	254,651
EBITDA	186,828	205,528	250,625	68,149	71,975	76,599	79,554	296,277	353,442
Depreciation and amortization expense	46,354	47,821	57,388	16,111	16,457	16,720	17,502	66,790	74,264
<b>Operating income (including options beg. Q105)</b>	<b>140,474</b>	<b>157,707</b>	<b>193,237</b>	<b>52,038</b>	<b>55,518</b>	<b>59,879</b>	<b>62,052</b>	<b>229,488</b>	<b>279,179</b>
Interest and other income (expense), net	2,052	2,564	7,352	2,331	2,096	2,252	2,417	9,095	11,463
Pretax income	142,526	160,271	200,589	54,369	57,614	62,131	64,469	238,583	290,642
Income tax expense	45,532	48,886	59,646	16,041	16,816	18,329	19,018	70,204	87,193
Equity investee earnings	953	734	1,588	566	714	180	657	2,116	2,137
<b>Net income (excl. nonrecurring items, incl. options beg. Q105)</b>	<b>97,947</b>	<b>112,119</b>	<b>142,531</b>	<b>38,894</b>	<b>41,512</b>	<b>43,982</b>	<b>46,107</b>	<b>170,495</b>	<b>205,587</b>
Nonrecurring items		0	0						
Tax adjustment		0	0						
Nonrecurring items (net of tax)		(4,400)	2,467						
		(a)	(b)						
<b>Net income</b>	<b>\$97,947</b>	<b>\$107,719</b>	<b>\$144,998</b>	<b>\$38,894</b>	<b>\$41,512</b>	<b>\$43,982</b>	<b>\$46,107</b>	<b>\$170,495</b>	<b>\$205,587</b>
EPS (excl. nonrecurring items, incl. options beg. Q105)	<b>\$1.52</b>	<b>\$1.76</b>	<b>\$2.20</b>	<b>\$0.60</b>	<b>\$0.64</b>	<b>\$0.68</b>	<b>\$0.71</b>	<b>\$2.63</b>	<b>\$3.15</b>
EPS (as reported)	<b>\$1.52</b>	<b>\$1.69</b>	<b>\$2.24</b>	<b>\$0.60</b>	<b>\$0.64</b>	<b>\$0.68</b>	<b>\$0.71</b>	<b>\$2.63</b>	<b>\$3.15</b>
Weighted average shares outstanding (diluted)	64,589	63,772	64,764	64,895	64,628	64,778	64,928	64,808	65,303
<b>MARGIN ANALYSIS:</b>									
Gross profit	33.6%	33.6%	34.2%	34.6%	34.1%	34.7%	35.1%	34.6%	35.2%
SG&A	15.3%	16.4%	15.5%	15.6%	15.2%	15.0%	15.1%	15.2%	14.7%
EBITDA	18.3%	17.2%	18.7%	19.0%	18.9%	19.7%	20.0%	19.4%	20.5%
Depreciation & amortization	4.5%	4.0%	4.3%	4.5%	4.3%	4.3%	4.4%	4.4%	4.3%
Operating income	13.8%	13.2%	14.4%	14.5%	14.6%	15.4%	15.6%	15.0%	16.2%
Tax rate	31.9%	30.5%	29.7%	29.5%	29.2%	29.5%	29.5%	29.4%	30.0%
Net income	9.6%	9.4%	10.6%	10.9%	10.9%	11.3%	11.6%	11.2%	11.9%
<b>GROWTH RATES:</b>									
<b>Revenue</b>	<b>9%</b>	<b>17%</b>	<b>12%</b>	<b>12%</b>	<b>14%</b>	<b>14%</b>	<b>16.0%</b>	<b>14%</b>	<b>13%</b>
Revenue (excl. foreign exchange effect)									
Revenue (organic)			11%	10%	13%			13%	13%
Gross profit	12%	17%	14%	16%	16%	15%	16%	15%	15%
SG&A	9%	26%	6%	16%	13%	8%	12%	12%	10%
EBITDA	15%	10%	22%	16%	18%	20%	18%	18%	19%
<b>Operating income</b>	<b>21%</b>	<b>12%</b>	<b>23%</b>	<b>14%</b>	<b>18%</b>	<b>22%</b>	<b>21%</b>	<b>19%</b>	<b>22%</b>
Net income (excl. nonrecurring items)	29%	14%	27%	16%	19%	23%	20%	20%	21%
<b>EPS (excl. nonrecurring items, incl. options)</b>	<b>26%</b>	<b>16%</b>	<b>25%</b>	<b>16%</b>	<b>19%</b>	<b>23%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>
EPS (excl. nonrecurring items, excl. options)	28%	22%	22%	7%	10%	15%	12%	11%	20%
Diluted shares outstanding	2%	-1%	2%	1%	0%	0%	0%	0%	1%

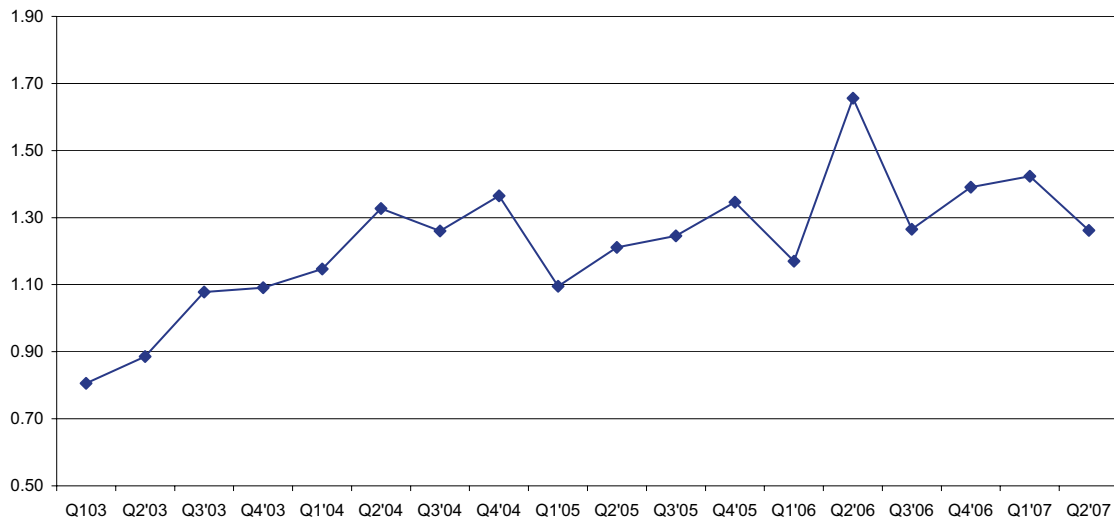
E=William Blair &amp; Company, L.L.C. estimate

(a) one-time repatriation related income tax charge

(b) favorable resolution of several income tax matters outside the United States

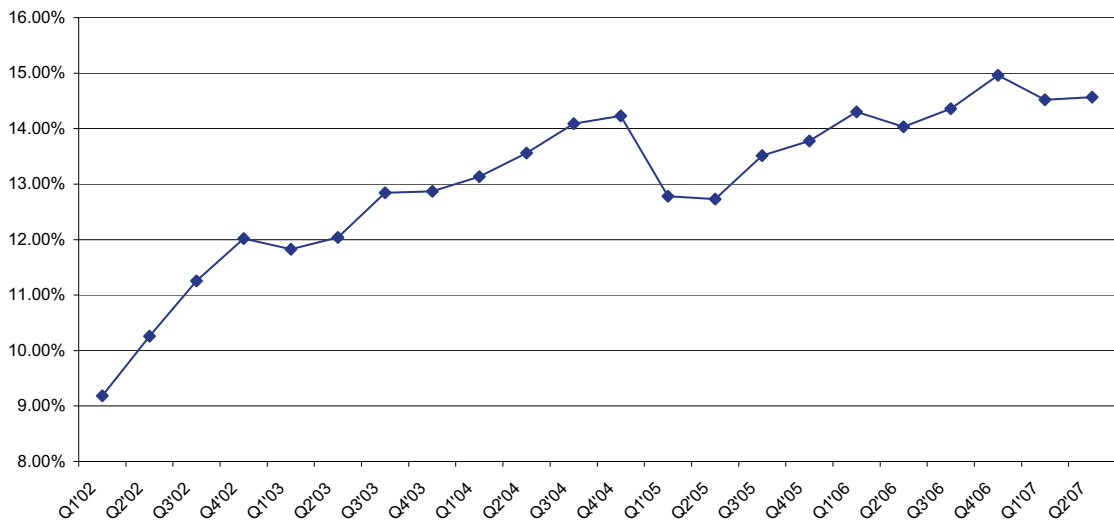
Source: Company reports and William Blair &amp; Company, L.L.C. estimates

**Figure 21**  
**Covance Inc.**  
**Quarterly Book-to-Bill Ratio**  
 (Calendar Quarters, not Fiscal Quarters)



Source: Company reports

**Figure 22**  
**Covance Inc.**  
**Quarterly Operating Margins**  
 (Calendar Quarters, not Fiscal Quarters)

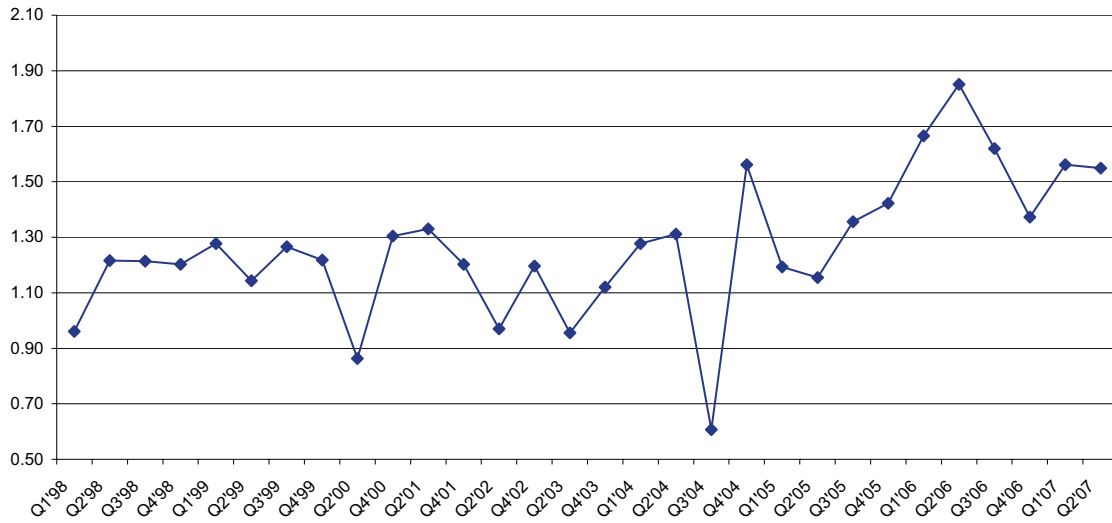


Source: Company reports

**Table 11**  
**PAREXEL International Corporation**  
**Earnings Model**  
(\$ in thousands, except per share data)

Fiscal year ends June 30	2005	2006	2007	Sep Q1'08E	Dec Q2'08E	Mar Q3'08E	Jun Q4'08E	2008E	2009E
<b>Net revenue</b>	<b>\$544,726</b>	<b>\$614,947</b>	<b>\$741,955</b>	<b>\$205,582</b>	<b>\$215,725</b>	<b>\$226,487</b>	<b>\$242,920</b>	<b>\$890,714</b>	<b>\$1,021,682</b>
Direct costs	360,044	405,722	487,200	134,040	139,919	146,764	157,169	577,892	660,089
Gross Profit	184,682	209,225	254,755	71,543	75,806	79,724	85,751	312,823	361,593
Selling, general, and administrative expense	130,527	142,571	166,368	47,490	47,783	50,054	53,685	199,012	228,392
EBITDA	54,155	66,654	88,387	24,053	28,023	29,670	32,065	113,811	133,201
Depreciation and amortization expense	26,914	26,035	30,855	8,223	9,168	9,626	10,324	37,341	42,400
<b>Operating income</b>	<b>27,241</b>	<b>40,619</b>	<b>57,532</b>	<b>15,830</b>	<b>18,854</b>	<b>20,044</b>	<b>21,741</b>	<b>76,470</b>	<b>90,801</b>
Interest and other income (expense), net	3,318	1,919	1,968	(300)	(300)	(300)	(300)	(1,200)	(840)
Pretax income	30,559	42,538	59,500	15,530	18,554	19,744	21,441	75,270	89,962
Income tax expense	11,607	19,376	23,363	6,057	7,143	7,503	8,148	28,851	33,286
Minority interest expense (benefit)	351	(1,098)	(32)	11	131	(103)	(71)	(33)	(33)
<b>Net income (excl. nonrecurring items, incl. option expense, beginning Q106)</b>	<b>18,601</b>	<b>24,260</b>	<b>36,169</b>	<b>9,462</b>	<b>11,280</b>	<b>12,344</b>	<b>13,365</b>	<b>46,452</b>	<b>56,709</b>
Nonrecurring items	(29,819)	(764)	34					0	0
Tax adjustment	(23,959)	48	(14)					0	0
Nonrecurring items (net of tax)	(53,778)	(716)	1,120					0	0
	(l)	(m,n,o)							
<b>Net income (as reported)</b>	<b>(\$35,177)</b>	<b>\$23,544</b>	<b>\$37,289</b>	<b>\$9,462</b>	<b>\$11,280</b>	<b>\$12,344</b>	<b>\$13,365</b>	<b>\$46,452</b>	<b>\$56,709</b>
EPS (excl. nonrecurring items, incl. option expense beg Q106)	\$0.70	\$0.90	\$1.29	\$0.33	\$0.39	\$0.43	\$0.46	\$1.61	\$1.93
EPS (as reported)	(\$1.32)	\$0.87	\$1.33	\$0.33	\$0.39	\$0.43	\$0.46	\$1.61	\$1.93
EPS (calendar, excl. nonrecurring, incl. options)	\$0.60	\$1.12	\$1.44					\$1.74	
Weighted average shares outstanding (diluted)	26,616	27,002	28,109	28,575	28,725	28,875	29,025	28,800	29,400
<b>MARGIN ANALYSIS:</b>									
Gross profit (incl. option expense beg. Q106)		34.0%	34.3%	34.8%	35.1%	35.2%	35.3%	35.1%	35.4%
SG&A (incl. option expense beg. Q106)		23.2%	22.4%	23.1%	22.2%	22.1%	22.1%	22.3%	22.4%
EBITDA (incl. option expense beg. Q106)		10.8%	11.9%	11.7%	13.0%	13.1%	13.2%	12.8%	13.0%
Depreciation & amortization	4.9%	4.2%	4.2%	4.0%	4.3%	4.3%	4.3%	4.2%	4.2%
<b>Operating income (incl. option expense beg Q106)</b>		<b>6.6%</b>	<b>7.8%</b>	<b>7.7%</b>	<b>8.7%</b>	<b>8.9%</b>	<b>9.0%</b>	<b>8.6%</b>	<b>8.9%</b>
Tax rate	38.0%	46%	39.3%	39.0%	38.5%	38.0%	38.0%	38.3%	37.0%
Net income	3.4%	3.9%	4.9%	4.6%	5.2%	5.5%	5.5%	5.2%	5.6%
<b>GROWTH RATES:</b>									
<b>Revenue</b>	<b>1%</b>	<b>13%</b>	<b>21%</b>	<b>25%</b>	<b>20%</b>	<b>18%</b>	<b>18%</b>	<b>20%</b>	<b>15%</b>
Revenue (ex-acquisitions)				24%	17%	16%	16%	18%	
Gross profit (incl. option expense beg. Q106)		13%	22%	28%	26%	21%	18%	23%	16%
SG&A (incl. option expense beg. Q106)		9%	17%	25%	23%	18%	14%	20%	15%
EBITDA (incl. option expense beg. Q106)		23%	33%	35%	31%	25%	26%	29%	17%
<b>Operating income (incl. option expense beg. Q106)</b>		<b>49%</b>	<b>42%</b>	<b>41%</b>	<b>36%</b>	<b>30%</b>	<b>28%</b>	<b>33%</b>	<b>19%</b>
Net income (excl. nonrecurring items)	-15%	30%	49%	36%	24%	27%	28%	28%	22%
<b>EPS (excl. nonrecurring, incl. option exp. beg. Q106)</b>		<b>29%</b>	<b>43%</b>	<b>33%</b>	<b>21%</b>	<b>22%</b>	<b>25%</b>	<b>25%</b>	<b>20%</b>
Diluted shares outstanding	-1%	1%	4%	2%	3%	3%	2%	2%	2%
E=William Blair & Company, L.L.C. estimate									
(k) \$10.8M pretax, restructuring charge due to staff reductions and facility closures; \$1.2M pre-tax charge for facility abandonment costs and other expenses.									
(l) Company recorded restructuring charge									
(m) Company recorded special charge of \$1.6M in conjunction with Perceptives minority interest buyback, partly offset by \$0.7M net reduction to the restructuring reserve									
(n) Company recorded restructuring benefit of \$26K									
(o) Company recorded restructuring benefit of \$131K									
Source: Company reports and William Blair & Company, L.L.C. estimates									

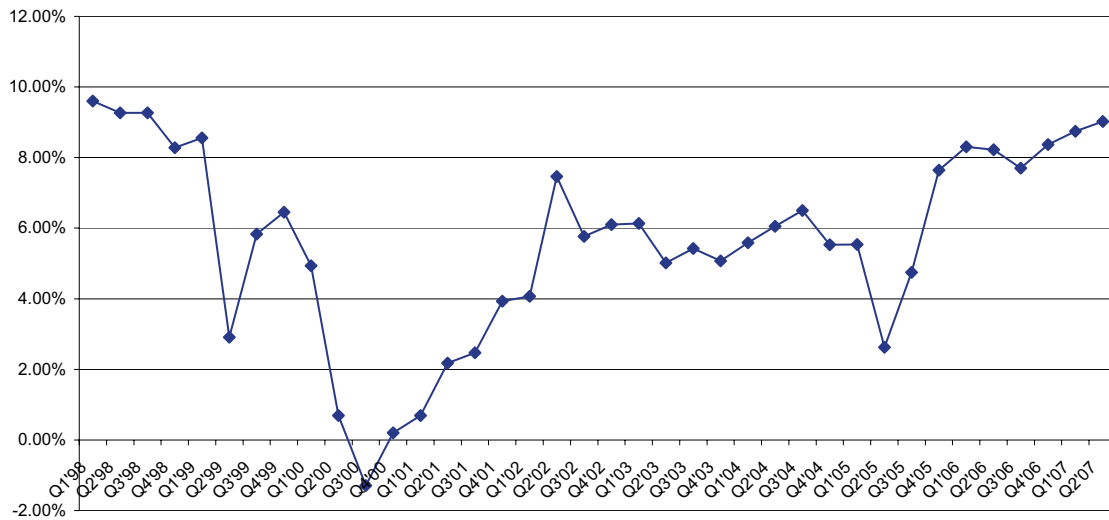
**Figure 23**  
**PAREXEL International Corporation**  
**Quarterly Book-to-Bill Ratio**  
 (Calendar Quarters, not Fiscal Quarters)



Source: Company reports

Note: There was a period of time between 2000 and 2003 when PRXL only gave new business statistics twice per year, rather than quarterly

**Figure 24**  
**PAREXEL International Corporation**  
**Quarterly Operating Margins**  
 (Calendar Quarters, not Fiscal Quarters)



Source: Company reports

**Table 12**  
**PRA International**  
**Earnings Model**  
(\$ in thousands, except per share data)

Fiscal year ends December 31	2004	2005	2006	Mar Q1'07	Jun Q2'07	Sep Q3'07E	Dec Q4'07E	2007E	2008E
<b>Net revenue</b>	<b>\$277,479</b>	<b>\$294,738</b>	<b>\$303,207</b>	<b>\$85,052</b>	<b>\$90,174</b>	<b>\$87,227</b>	<b>\$86,949</b>	<b>\$349,402</b>	<b>\$397,103</b>
Direct costs	134,067	136,572	154,416	46,680	49,852	46,230	45,648	188,411	206,975
Gross Profit	143,412	158,166	148,791	38,372	40,322	40,997	41,301	160,992	190,128
SG&A Total	90,843	95,827	101,381	29,308	29,447	29,221	29,389	117,365	135,518
EBITDA	52,569	62,340	47,410	9,064	10,875	11,776	11,912	43,627	54,610
Depreciation and amortization expense	9,691	11,156	12,587	3,727	3,847	3,925	3,913	15,412	15,090
<b>Operating income</b>	<b>42,878</b>	<b>51,184</b>	<b>34,823</b>	<b>5,337</b>	<b>7,028</b>	<b>7,850</b>	<b>7,999</b>	<b>28,215</b>	<b>39,520</b>
Interest and other income (expense), net	(3,681)	44	324	(253)	(249)	(235)	(222)	(960)	(734)
Pretax income	39,197	51,228	35,147	5,084	6,779	7,615	7,777	27,255	38,785
Income tax expense	14,360	19,005	6,944	1,378	1,295	2,437	2,489	7,598	10,860
<b>Net income (excl. extraord, incl. options beg. Q106)</b>	<b>24,837</b>	<b>32,223</b>	<b>28,203</b>	<b>3,706</b>	<b>5,484</b>	<b>5,178</b>	<b>5,288</b>	<b>19,657</b>	<b>27,926</b>
Nonrecurring items	(6,452)	0	(1,650)	(958)	(6,654)	(1,700)		(9,312)	
Tax adjustment	2,364	-	292	260	1,863	544		2,667	
Nonrecurring items (net of tax)	(4,088)	0	(1,358)	(698)	(4,791)	(1,156)		(6,645)	
	(b,c,d,e)		(f)	(g)	(h)	(i)		(g,h,i)	
<b>Net income (incl. nonrecurring &amp; options)</b>	<b>\$20,749</b>	<b>\$32,223</b>	<b>\$26,845</b>	<b>\$3,008</b>	<b>\$693</b>	<b>\$4,022</b>	<b>\$5,288</b>	<b>\$13,012</b>	<b>\$27,926</b>
<b>EPS (excl. extraord., incl. options beg. Q106)</b>	<b>\$1.22</b>	<b>\$1.32</b>	<b>\$1.14</b>	<b>\$0.15</b>	<b>\$0.22</b>	<b>\$0.20</b>	<b>\$0.21</b>	<b>\$0.78</b>	<b>\$1.08</b>
<b>EPS (as reported)</b>	<b>\$1.02</b>	<b>\$1.32</b>	<b>\$1.08</b>	<b>\$0.12</b>	<b>\$0.03</b>	<b>\$0.16</b>	<b>\$0.21</b>	<b>\$0.51</b>	<b>\$1.08</b>
Weighted average shares outstanding (diluted)	20,330	24,390	24,745	25,206	25,261	25,361	25,461	25,322	25,886
<b>MARGIN ANALYSIS:</b>									
Gross profit	51.7%	53.7%	49.1%	45.1%	44.7%	47.0%	47.5%	46.1%	47.9%
SG&A (including options beginning Q106)			33.4%	34.5%	32.7%	33.5%	33.8%	33.6%	34.1%
EBITDA (including options beginning Q106)			15.6%	10.7%	12.1%	13.5%	13.7%	12.5%	13.8%
Depreciation & amortization	3.5%	3.8%	4.2%	4.4%	4.3%	4.5%	4.5%	4.4%	3.8%
<b>Operating income (including options beg. Q106)</b>			<b>11.5%</b>	<b>6.3%</b>	<b>7.8%</b>	<b>9.0%</b>	<b>9.2%</b>	<b>8.1%</b>	<b>10.0%</b>
Tax rate	36.6%	37.1%	19.8%	27.1%	19.1%	32.0%	32.0%	27.9%	28.0%
Net income (including options beginning Q106)			9.3%	4.4%	6.1%	5.9%	6.1%	5.6%	7.0%
<b>GROWTH RATES:</b>									
<b>Revenue</b>	<b>12%</b>	<b>6%</b>	<b>3%</b>	<b>23%</b>	<b>29%</b>	<b>7%</b>	<b>6%</b>	<b>15%</b>	<b>14%</b>
Gross profit	18%	10%	-6%	13%	20%	1%	1%	8%	18%
SG&A (including options beginning Q106)			6%	27%	23%	13%	2%	16%	15%
EBITDA (including options beginning Q106)			-24%	-18%	12%	-20%	-1%	-8%	25%
<b>Operating income (including options beg. Q106)</b>			<b>-32%</b>	<b>-38%</b>	<b>0%</b>	<b>-29%</b>	<b>-3%</b>	<b>-19%</b>	<b>40%</b>
Net income (excl. nonrecurring items)	67%	30%	-12%	-39%	-20%	-37%	-25%	-30%	42%
<b>EPS (excl. nonrecurring items, incl. options beg. Q106)</b>			<b>-14%</b>	<b>-42%</b>	<b>-22%</b>	<b>-38%</b>	<b>-26%</b>	<b>-32%</b>	<b>39%</b>
Diluted shares outstanding	4%	20%	1%	4%	3%	2%	1%	2%	2%

E=William Blair &amp; Company, L.L.C. estimate

(b) Adjustment includes \$3.158M Tender Option Activity

(c) Adjustment includes \$416K Tender Option Activity

(d) Adjustment includes \$257K Tender Option Activity

(e) Adjustment includes \$288K Tender Option Activity

(f) Adjustment is for Pat Donnelly's severance charge

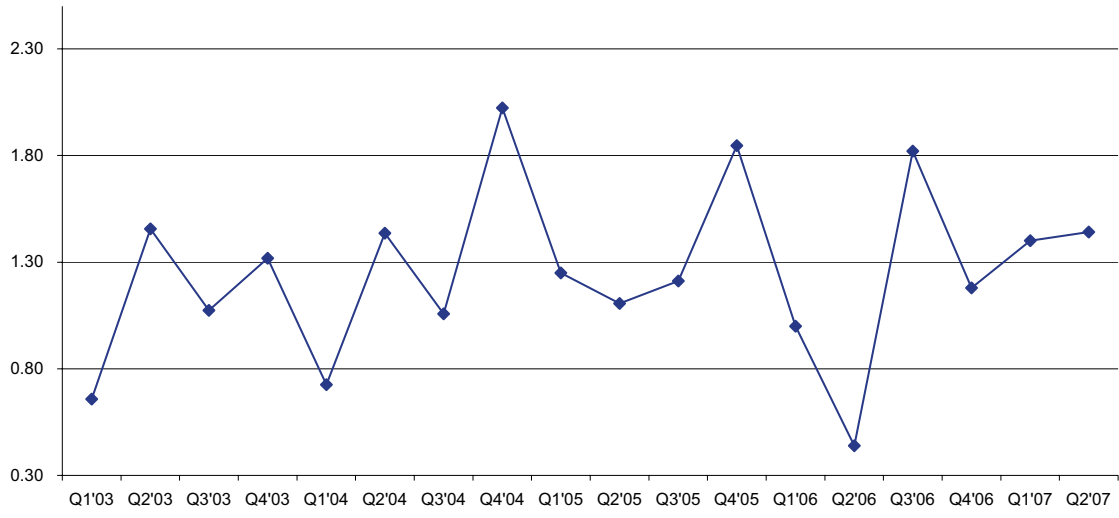
(g) Adjustment is for \$0.958M restructuring charge

(h) Adjustment is for \$6.654M restructuring charge

(i) Adjustment is for expected \$1.7M charge for HQ relocation from Reston to Raleigh

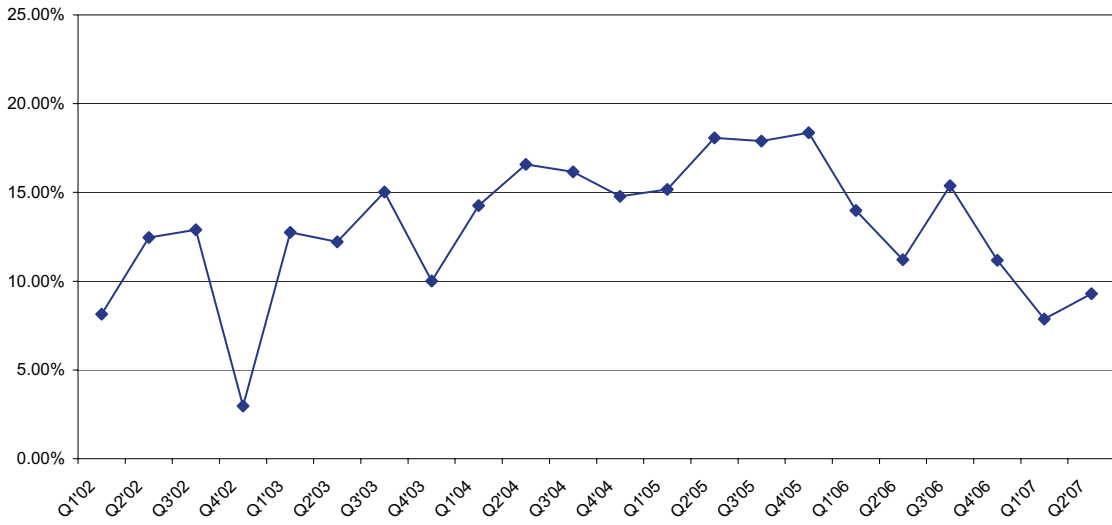
Source: Company reports and William Blair &amp; Company, L.L.C. estimates

**Figure 25**  
**PRA International**  
**Quarterly Book-to-Bill Ratio**



Source: Company reports

**Figure 26**  
**PRA International**  
**Quarterly Operating Margins**



Source: Company reports

**Table 13**  
**Contract Research Organizations**  
**Comparative Valuation Summary**  
(in millions, except per-share data)

Company	Rating / Profile	10/4/2007 Price	% Chg YTD	Diluted Shares	Mkt Cap	Curr. Ann. Rev.	Mkt. Cap/ Rev	Calendar Year EPS(a)		P/E Ratio		3 Yr Est Growth Rate	2007 P/E to Growth	Last Quarter Actual		
								2007(E)	2008(E)	'07(E)	'08(E)			Growth Rate		EBIT Margin
														Rev	EPS	
Charles River Laboratories (CRL)	O/C	\$56.89	32%	68.5	\$3,898	\$1,230	3.2x	\$2.50	\$2.85	22.8x	20.0x	14%	163%	15%	10%	21%
Covance (CVD)	O/E	\$78.05	32%	64.6	\$5,044	\$1,525	3.3x	\$2.63	\$3.15	29.7x	24.8x	18%	165%	14%	19%	15%
ICON plc (ICLR)	O/A	\$54.59	45%	29.7	\$1,621	\$588	2.8x	\$1.79	\$2.15	30.5x	25.4x	20%	152%	37%	38%	11%
Kendle (KNDL)	NR	\$44.83	43%	14.9	\$666	\$391	1.7x	\$1.73	\$2.42	25.9x	18.5x	34%	76%	58%	17%	12%
PAREXEL International (PRXL)	M/A	\$45.58	57%	28.4	\$1,296	\$821	1.6x	\$1.44	\$1.74	31.7x	26.2x	18%	181%	21%	23%	8%
Pharm. Prod. Devel. (PPDI)	O/C	\$37.51	16%	119.8	\$4,493	\$1,284	3.5x	\$1.37	\$1.70	27.4x	22.1x	15%	183%	13%	15%	19%
PRA International (PRAI)	M/A	\$29.47	17%	25.3	\$744	\$361	2.1x	\$0.78	\$1.08	37.8x	27.3x	16%	236%	29%	-22%	8%
PharmaNet Development (PDGI)	NR	\$31.59	43%	19.0	\$600	\$342	1.8x	\$1.16	\$1.50	27.2x	21.1x	15%	182%	18%	75%	7%
<b>CRO AVERAGE</b>			<b>36%</b>				<b>2.5x</b>			<b>29.1x</b>	<b>23.2x</b>	<b>19%</b>	<b>167%</b>	<b>25%</b>	<b>22%</b>	<b>13%</b>

Source: Company reports and William Blair & Company, L.L.C.

(NR) Not Rated

(a) Consensus estimates from First Call for companies not rated by William Blair & Company, L.L.C.

Additional information is available upon request.

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DJIA: 13974.31  
 S&P 500: 1542.84  
 NASDAQ: 2733.57

The prices of the common stock of other public companies mentioned in this report follow:

Amgen	\$55.39
AstraZeneca	\$52.30
Biogen	\$65.88
Bristol-Myers	\$29.74
Eli Lilly	\$58.96
Genentech	\$78.00
GlaxoSmithKine	\$54.14
Johnson & Johnson	\$66.11
Kendle	\$44.83
Merck	\$52.86
Millennium	\$10.09
Pfizer	\$25.30
PharmaNet	\$31.59
Schering-Plough	\$32.53
Wyeth	\$46.59





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Market Perform (Hold)	39%	Market Perform (Hold)	5%
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## EQUITY RESEARCH DIRECTORY

**Bob Newman, CFA, Principal** Manager and Director of Research 312.364.8783  
**Kyle Harris, CFA** Operations Manager 312.364.8230

### BUSINESS SERVICES

#### Industrial Growth

Jeff Germanotta, Principal 312.364.5411  
Group Head–Business Services  
*Industrial Products and Distribution, Logistics*

#### Media & Marketing

Troy Mastin, Principal 312.364.5415  
*Advertising and Marketing Services*

#### Technology & Professional Services

Brandon Dobell 312.364.8773  
*Educational Services, Information Services*

Timothy McHugh, CFA 312.364.8229  
*Consulting, Staffing*

John Neff, CFA 312.364.8914  
*Information Services, Collection Companies*

Bruce Simpson, CFA 312.364.8177  
*Commercial Services, Information Services*

### CONSUMER

Mark Miller, CFA, Principal 312.364.8498  
Group Head–Consumer  
*Discount Stores, Drug and Food Retailers*

Jon Andersen, CFA 312.364.8697  
*Branded Consumer Products*

Jack Murphy, CFA 312.364.8584  
*Hardlines Retailers, E-commerce*

Bob Simonson, CFA 312.364.8972  
*Cruise Lines, Leisure, Motorsports, Specialty Retail*

Sharon Zackfia, CFA, Principal 312.364.5386  
*Restaurants, Specialty Retail*

### FINANCIAL

Mark Lane, Principal 312.364.8686  
Group Head–Financial  
*Asset Management, Insurance, Financial Guaranty,  
Brokerage, Exchanges*

David Long, CFA 312.364.8435  
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### HEALTH CARE

Ben Andrew, Principal 312.364.8828  
Group Head–Health Care  
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Ryan Daniels, CFA, Principal 312.364.8418  
*Specialty Providers and Disease Management*

John Kreger, Principal 312.364.8597  
*Pharmaceutical Outsourcing, Distribution*

John Sonnier 312.364.8224  
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#### Hardware

Jeff Rosenberg, CFA, Principal 312.364.8342  
Group Head–Technology  
*Electronic Components, Contract Manufacturers*

Bill Benton, CFA, Principal 312.364.8355  
*Communications and Process Technologies, Defense Analytics*

#### Software & Services

Laura Lederman, CFA, Principal 312.364.8223  
*Business Software, IT Services*

Ralph Schackart III, CFA 312.364.8753  
*Digital Media, Gaming*

Corey Tobin 312.364.5362  
*Specialty Technology, Health Care IT*

Franco Turrinelli, CFA, Principal 312.364.8166  
*Technology Services, Payments Infrastructure*

### EDITORIAL

Steve Goldsmith, Head Editor 312.364.8540  
Beth Pekol +44 20 7868 4516  
Lisa Zurcher 312.364.8437

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William Blair & Company, L.L.C. 222 West Adams Street Chicago, Illinois 60606 312.236.1600 www.williamblair.com

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