

## CRO Service Quality and Corporate Performance

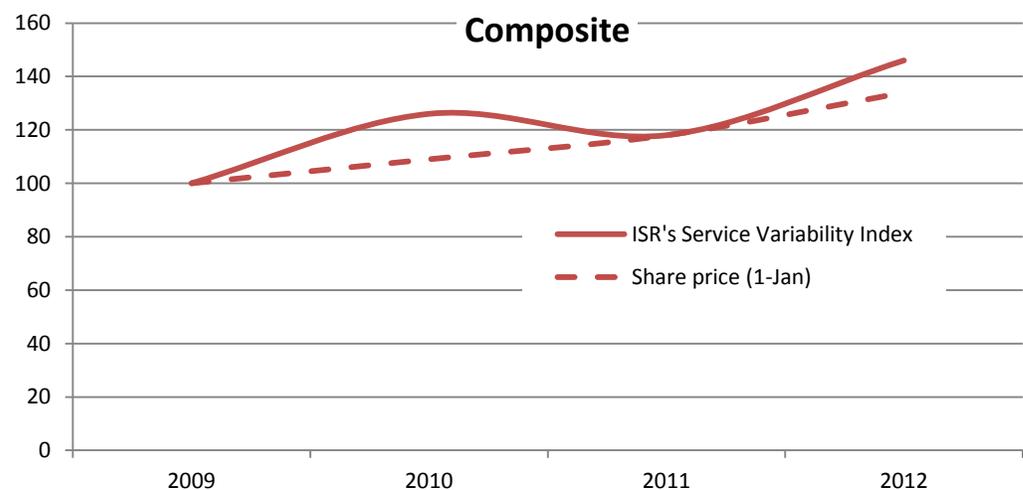
The relationship between ISR's Service Variability Index (SVI) and share price

It's a commonly held belief that if a service provider consistently meets customer expectations, then it will prosper financially. ISR wanted to find out if this was true for the Contract Research Organization (CRO) industry. To do so, ISR examined four years of historical service provider performance data paired with share price for five leading CROs.

**The conclusion:** A solid relationship exists between a CRO's service quality and their financial performance. Service quality was measured using ISR's proprietary Service Variability Index (SVI) and financial performance was measured using share price. The SVI is an index developed by ISR to measure how well service organizations meet customer expectations.

**The analysis:** ISR analyzed the SVI data from the 2009, 2010, 2011, and 2012 CRO Quality Benchmarking reports alongside each company's closing stock price on the first day of trading in that year. The share price data coincide with the time ISR's primary survey data was being collected. This analysis includes the public companies available, at the time that had enough responses to ISR's survey to make the analysis viable, and include Covance, ICON, Kendle (to 2011), PAREXEL, and PPD (to December 2011). Both the SVI and the share price were indexed, using 2009 as the base year. The SVI figures are based on 816 service encounter ratings of these five companies, ensuring high confidence in the analysis. Overall, these service providers have, on average, improved their service delivery over the past four years and the SVI has a very strong relationship to the average company share price.

*In aggregate, the relationship between ISR's SVI and a company's share price holds true.*

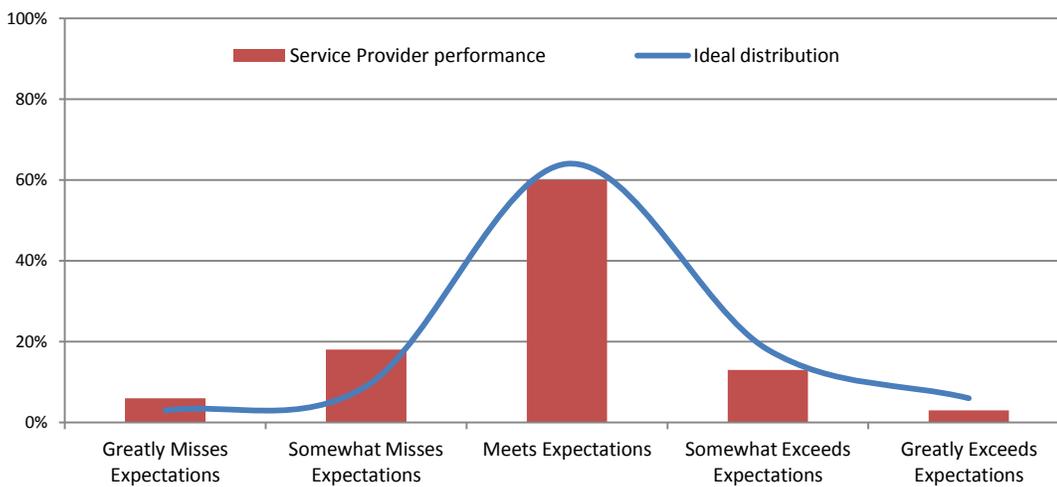


**The caveats:** Under no pretense do we believe there is a single metric that can explain or predict the stock market performance of pharmaceutical service providers. The supply and demand forces exerted on a company's stock price are an accumulation of current and past performance, future expectations, management strength, competitive forces, and macro economic trends. In the world of pharmaceutical service providers these forces manifest themselves in the form of book-to-bill ratios, customer portfolios, strategic relationships (e.g. predictable revenue streams), service diversification, fixed vs. variable assets, geographic mix, and the ebbs and flows of industry consolidation.

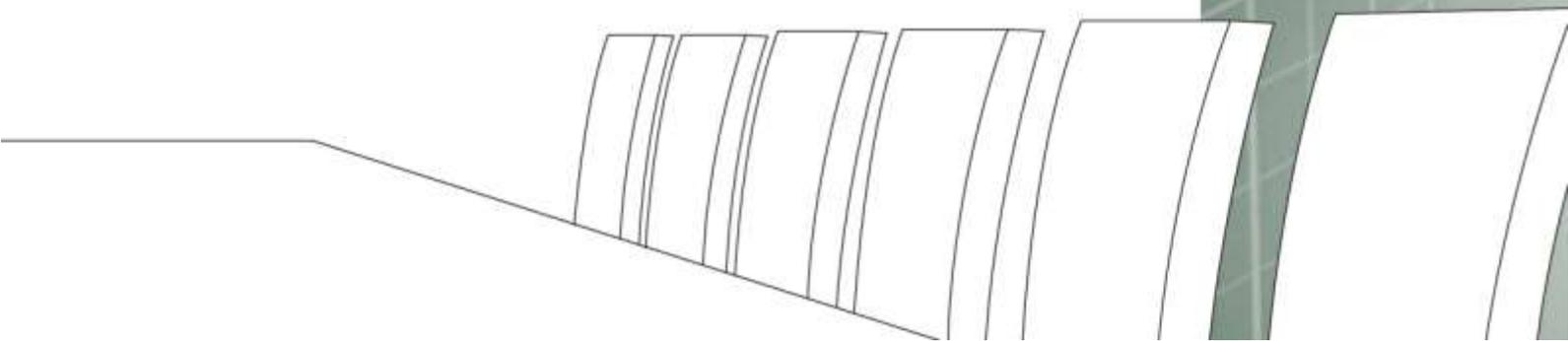
Therefore, if causal inference cannot be claimed, how then do we explain the correlation which does exist? Back to first principles: a service provider which is improving its service is likely to enjoy improved financial success. ISR’s SVI reliably measures service quality and hence is correlated with financial performance. The goal of this paper is to stimulate conversation regarding the importance service execution plays in the financial health of an organization and to encourage the pharmaceutical service provider industry to adopt a consistent and continual program that ensures they are measuring their performance against their customers’ expectations.

**ISR’s Service Variability Index:** Industry Standard Research created the Service Variability Index for our inaugural CRO Quality Benchmarking report in 2009. It gives our clients, in one place, a summary of a provider’s performance variability. The premise of the SVI is that service providers should strive to meet customer expectations. There should not be too many instances where they fall below customer expectations and they should not “sandbag” expectations in order to artificially inflate performance.

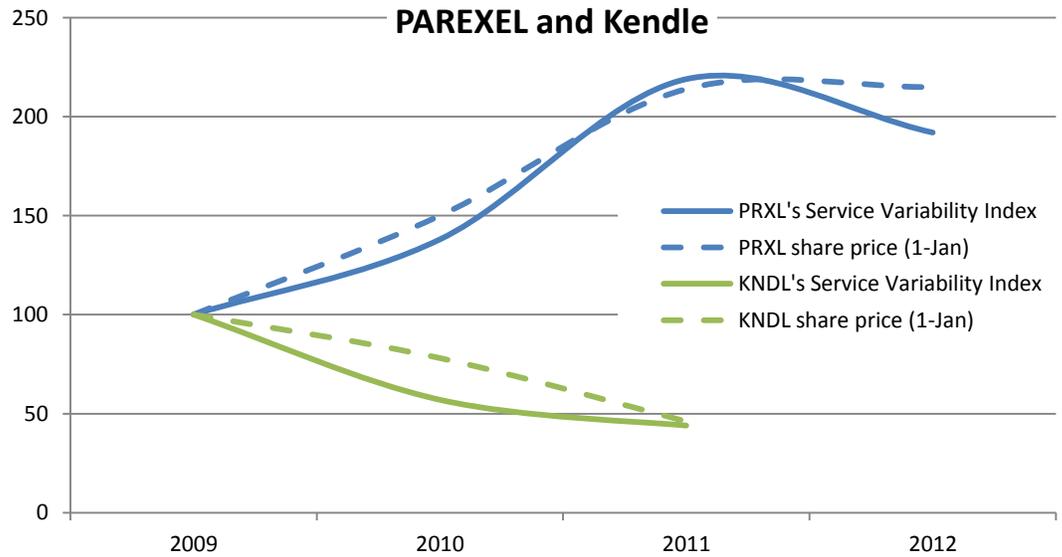
*ISR’s Service Variability Index (SVI) is a proprietary measure of service provider performance against expectations.*



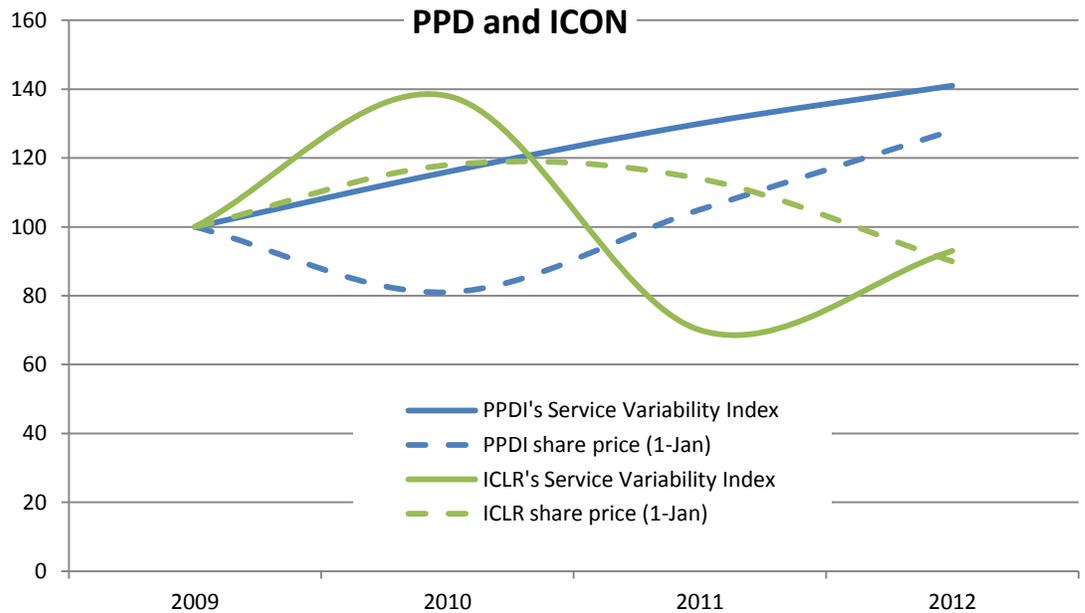
Academic research demonstrates that as an industry matures and repeat purchases become more prevalent, customers start expecting more from their suppliers, thus making it harder for suppliers to exceed expectations. The SVI is a representation of the differential between the ideal distribution and a particular service provider’s actual performance against expectations. As reported in ISR’s syndicated reports, the SVI is typically represented via a chart similar to the one above. The chart contains two metrics, a blue solid line that represents the ideal distribution for service provider performance and the red bars are how the individual service provider performed against expectations. It is the difference between these two metrics that creates the SVI.



Breaking down the analysis for each company reveals some very interesting results and the overall findings hold: that service provider performance, measured by ISR's SVI, is highly relational to a company's share price. We start by taking a look at PAREXEL (ticker PRXL) and Kendle (ticker KNDL) to illustrate the relationship remains intact during a time when performance and share price are either rapidly climbing or rapidly falling.

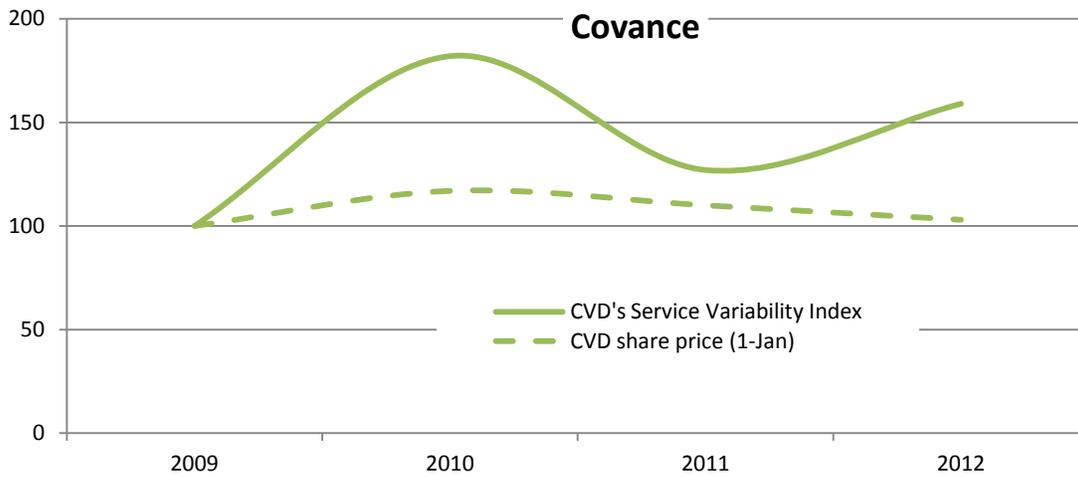


The next set of service providers consists of PPD (ticker PPDI) and ICON (ticker ICLR). Again, these CROs have experienced both a rise (PPDI) and decline (ICLR) in overall share price over the measurement period. ICON is an interesting picture in that they have had large swings in their SVI over the time period, but the relationship between SVI and share price remains intact. PPD, on the other hand, has done an excellent job at consistently raising the bar on their performance and their share price (pre-buyout) rose at roughly the same rate.

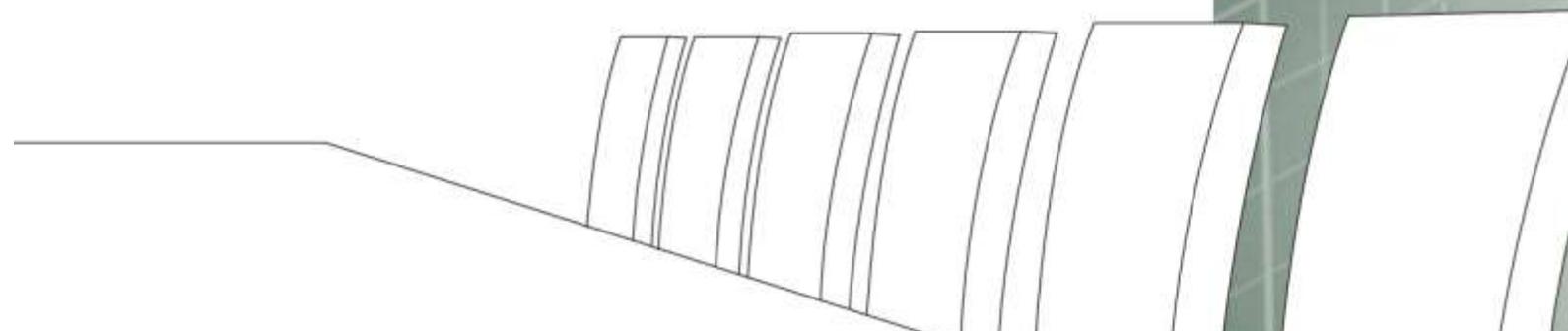


*The analysis of PAREXEL and Kendle was one of the more persuasive factors that led ISR to publish this paper. The fact that the SVI-to-stock price was correlated for companies experiencing both positive and negative performance gives some validity to the relationship.*

The final service provider examined is Covance (ticker CVD). Covance is somewhat of a special case in that their revenues, and therefore stock price, are only partially a result of “full-service” clinical development services – the heart of the SVI. Covance, unlike ICON, PAREXEL, PPD, and Kendle, generates a large proportion of their revenue based on their preclinical and central labs offerings. That said, the relationship between their SVI and share price still holds.



*Regardless of the exact service mix, the relationship between the SVI and a company's share price are directional, but somewhat weaker than the traditional full-service clinical development CROs.*



# CRO Service Quality and Corporate Performance

The relationship between ISR's Service Variability Index (SVI) and share price

**The conclusion: A solid relationship exists between a CRO's service quality and their financial performance. Service quality was measured using ISR's proprietary Service Variability Index (SVI) and financial performance was measured using share price.**

One of ISR's corporate tenants is that market data and intelligence are no good if an individual or organization can't use them to improve the business environment in which they operate. There is clearly a relationship between a CRO's service quality, measured by ISR's Service Variability Index (SVI), and their financial performance. While we do not pretend there is a large enough sample size for definitive statistical review, the  $R^2$  for this data set is 70%, meaning 70% of the variation in stock price can be explained by the SVI, and from a straight correlation perspective the data is correlated at 82%.

Consistently measuring service quality is good operational practice. This analysis illustrates that there exists a relationship between CRO service quality and financial success. Loyal customers come from consistently meeting expectations and eliminating surprises. Using ISR's battery of questions, methodologies, and proven driver analytics, CROs can develop and keep more loyal customers.

ISR's questionnaire design expertise, proprietary data analysis, and strategic insight can assist individuals and organizations by:

- Ensuring service quality and consistency is world-class, leading to improved financial performance for public or private companies.
- Making sure that your investments, mergers, and acquisitions are with companies exhibiting superior service quality.
- Developing employee performance goals linked to service quality.
- Developing loyal customers by ensuring there is a match between expectations and performance.

**ISR: Working to ensure you and your organization Act with Confidence.**



*ISR's questionnaire design expertise, proprietary data analysis, and strategic insight can assist individuals and organizations in making the best data-driven operational and strategic decisions possible.*

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