

BUILD OR BUY?

Is It Time for You to Take the Step?



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BACKGROUND

Few valuation practitioner conversations elicit more visceral response than the question: "Do you use Excel® or a valuation package for your work?" The pro-Excel response likely results from practitioners' emotional attachment to self-created worksheets. Such worksheets may have served them well (so far) and the prospect of conversion, however necessary, is easy to defer. Curiously, even those practitioners recognize the growing frequency of valuation package output in opposition reports. This article assists practitioners in their inevitable decision to acquire a valuation package to enhance their practice.

Note that whether Excel or a valuation package is used, such a tool is secondary to a valuator's expertise. No presently available technology can supplant the skill, knowledge, experience, education, and training comprising one's professional capabilities. Nonetheless, a valuator's practice can take a great leap forward by using the proper tool, thus enhancing his or her capabilities. That is, spending client time *thinking* and not "coding."

HISTORY

First, a little history. I completed tax returns several years ago for a small accounting firm using a pencil, mechanical calculator, and lots of erasers. The partners used top-of-the-line Addo-X mechanical calculators that weighed perhaps 20 pounds that vibrated their desks when completing large calculations. That method transitioned in a relative few short years through pencil-completed forms mailed to a processing service, keyboard entry using dial-up access to

send batches of returns, keyboard and printer access to a timeshare service, keyboard and screen access to a mainframe timeshare, mini-computer software housed in their office, microcomputer software residing in-house, and eventually... tax return processing through the cloud.

That transition in the tax profession—accelerated by PC-based calculation software, i.e., VisiCalc, Lotus 1-2-3 and finally, Excel, intrigued me.¹ It was obvious that a similar transition was occurring in valuation packages. Thus, I began searching for a valuation package at least 25 years ago. At the time, I found about a half-dozen packages from four to six vendors. I tried every package except one—a package released by a valuation organization that proved to be a disaster. It was so vilified by users I did not waste my time and it was soon taken off the market.

I purchased three different packages over a five-year period and used *all* of them, sometimes simultaneously, for comparison, until I began focusing on one that eventually dominated the field. I gained experience by assisting certain vendors with recommendations and beta testing. That gave me keen insight into their packages' respective approaches, calculations, reliability, flexibility, innovation, customer service, and other indicators that helped narrow my choice to one package.

My firm has used that vendor's updated package for nearly 15 years and has benefited from its continuously enhanced capabilities. It is essential to our practice and its versatility permits us to use it in nearly all of our assignments including valuation of

business interests and fractional interests, lost profits damages, solvency/insolvency, fraud, fraudulent transfer, financial statement manipulation, trial exhibits, transitional businesses, and the like.

THE CONVERSION QUESTIONS MOST OFTEN ENCOUNTERED

Considerable deliberation and article content over the years has addressed the need for transition to a valuation package. Naturally, certain practitioner questions tend to dominate the issue. They are summarized and addressed below. However, a well-known practitioner/author states the fundamental problem with self-created Excel worksheets:

The main cause for spreadsheet issues is that they don't follow a standard software development lifecycle. Unlike most profession-

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expert TIP

I am confident the majority of readers consider themselves in the valuation business, not the software business. Practitioners are well-advised to "stay" in the valuation business and avoid the software business.

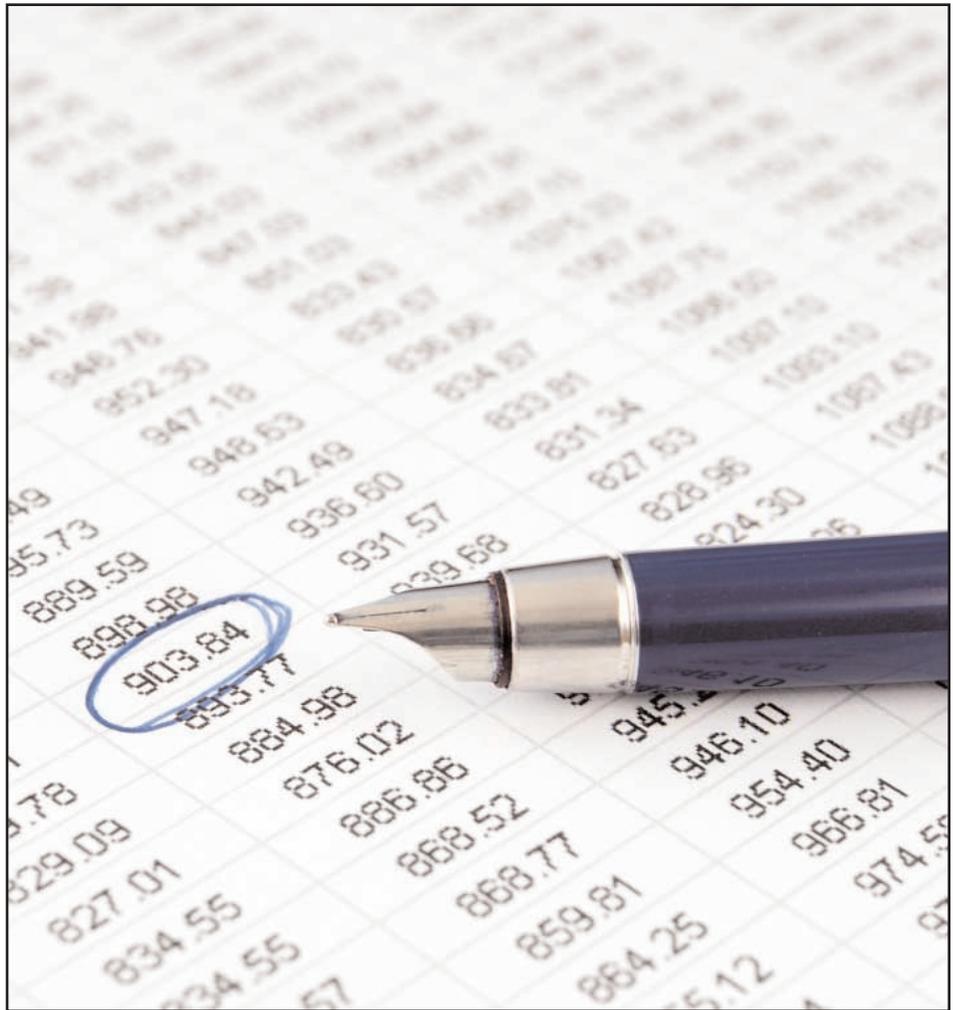
ally-written applications, spreadsheets are generally not created with diligent requirements, code review, and then testing process. Such process steps, when followed, lead to a higher quality application.³

SPREADSHEET (AND HUMAN) ERRORS

The human species is an extraordinary creation, but such capabilities generate errors. Interestingly, research indicates that the same creative processes that produce correct results also produce inherent errors. Spreadsheet construction is in reality a software coding process and even experienced software programmers produce a 3-5 percent error rate. Surprisingly, error detection skill precipitously declines *after* the fact. That is, while spreadsheet errors can be caught during construction, they are less likely to be caught after the spreadsheet is completed.⁴

Academics have studied self-created worksheet errors (logic, quantitative, and software) for many years. Some of the more profound findings are highlighted below:⁵

- 13 separate field audit studies (including KPMG and C&L) analyzed from 1 to 273 spreadsheets over a 13-year period. They found error rates ranging from 11 percent to 100 percent. Seven of the studies involving 113 spreadsheets found that 88 percent contained errors.
- The study noted: "Although there is great diversity in methodology and detailed results, *one key pattern* stands out clearly: *every study* that has attempted to measure errors has found them and has *found them in abundance.*" (emphasis added)
- 5 Percent Error - For every 20 cells containing a formula, about one error can be expected.
- 90 percent of spreadsheets containing more than 150 rows contained errors. (emphasis added)
- 100 percent of audited spreadsheets containing more than 2,300 rows or 2,200 formulas had errors. (emphasis added)



- Studies determined that "CPA experts" found only 66 percent of spreadsheet errors, i.e., they failed to find 34 percent of the errors!

The following conversion questions tend to dominate practitioners' concerns when considering the transition to a valuation package.

Are you in the valuation business or the software business?

I am confident the majority of readers consider themselves in the valuation business, not the software business. Nonetheless, the three following real-life situations illustrate how self-created Excel spreadsheets can creep into otherwise billable "thinking" time.

- **Sole practitioner** - A sole practitioner I know and respect told me that his self-created Excel-based FLP⁶ calculations comprise about 125

worksheets. He is rightly proud of his work and I am confident it fits his FLP focus. Nonetheless, his personal time investment is undoubtedly substantial and he could have spent his time generating revenue instead of building worksheets.

- **Medium-sized firm** - Another practitioner I respect indicated that his (medium-sized) firm committed \$75,000 to commission someone to write an Excel-based set of valuation worksheets for his firm. I don't know whether the project was a success. However, my professional experience in software design and development over the years suggests the result was behind schedule, over budget, and did not achieve all the expected objectives. The observation results from the tongue-in-cheek DRE principle.⁷

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- **National valuation firm** - A national valuation firm that I encounter uses self-created Excel worksheets as indicated by their report output. The various appraisers appear to use the same worksheets because the *same* spreadsheet error shows up regardless of the report signer. Specifically, the *same* error occurred in three distinct reports over a four-year period. Their third report was unchanged despite my testimony pointing out the errors in the first two reports.

Practitioners are well-advised to “stay” in the valuation business and avoid the software business.

How do I know that the valuation package calculations are correct?

The same question applies to each practitioner's self-created Excel model as detailed above. The software business follows some form of design/development lifecycle methodology that is tested and validated throughout the entire process, including updates. When the package vendor believes the package is near completion, it releases beta versions to practitioners who further vet the contents before the package update is released to the market. Finally, after beta testing (and refinement if necessary), the updated package is released to thousands of users who continually push the limits of the package. Consequently, if an occasional flaw finds its way into the finished package, it will be discovered and immediately resolved.

I am confident that few, if any, practitioners apply similar scrutiny to their self-created Excel worksheets unless their model comprises a few worksheets with very simple calculations. Nevertheless, even if a practitioner has fully vetted his/her self-created Excel model, inevitable “refinements” required for new assignments can create unseen discrepancies that invariably show up at the worst possible time.

Do you continually update and refine your Excel worksheets?

Excel-based valuation practitioners invariably answer this question, “Yes, as additional worksheets are needed.”

That response misses the point. That is, an Excel practitioner tends to construct—and rely on—only a select few methods. Consequently, Excel-based practitioners may be doing their clients and themselves a disservice by never considering alternative approaches and/or methods.

The package we use contains nearly every conceivable method with several variations for each, thus providing many dozens (perhaps hundreds) of combinations and permutations for each assignment. That permits us to readily analyze and produce 10-20 (or more) method conclusions in order to specifically match each assignment's unique facts and circumstances. Such breadth and depth of analysis is persuasive to the parties, demonstrates that our conclusion is based on “casting a wide net with a fine mesh,” and logically identifies inherent central tendencies to corroborate our conclusions.

Self-created Excel worksheets prevent practitioners from considering a much broader and deeper array of alternatives. Because human nature follows the path of least resistance, “one does what one knows.” If an alternative is necessary, it must be constructed, thus taking time and exposing the practitioner to error.

However, valuation packages are not constrained by such an artificial hindrance. Therefore, practitioners put themselves at risk by not considering and applying every feasible method in order to demonstrate their analytical breadth and depth. Further, each change in an Excel model increases the risk of error. A valuation package avoids such risk.

Do your Excel worksheets accommodate downloads from multiple databases?

The package we use saves considerable time and effort in many different ways.

One of the most obvious is the ability to analyze and download guideline transactions from nearly every available commercial market transaction database. The package also provides many other database options, including SIC/NAICS[®] codes, SBBI data (for all build-up components and Duff & Phelps components), private guideline company data (Bizcomps, IBA, Mid-Market Done Deals), public company transaction data, control premiums and minority discounts by industry, comparative analysis (RMA, IRS), DLOM analysis, among others.

The obvious advantages include ease of data capture, flexibility of analysis, testing of alternatives, and immediate application within pertinent methods. The ability to refine one's analyses, e.g., guideline transactions, offers ever more powerful results.

ANSWERS TO YOUR QUESTIONS

Readers are likely formulating additional questions if they have overcome the “not invented here” bias and read this far. A few likely questions are answered below.

What is the cost benefit of a valuation package?

The package and related databases that we use require about a \$2,000 initial investment with about a \$1,000 annual update investment. Assuming a \$250 hourly rate, a practitioner can afford to spend eight hours building an Excel-based model requiring \$2,000 in billable time. Even if the eight-hour Excel-based model is perfect and can be built upon, such a result is woefully inadequate compared to the comprehensive capabilities of a package. Further, the specter of errors inexorably rises.

A package investment is in reality a non-issue: an Excel-based model requires more work, probably contains some error(s), is risky to change, lacks inherent flexibility, may not permit certain downloads, and lacks the benefit of third-party review. Practitioners are rightly more concerned about per-

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forming higher quality work. Thus, if a package enables them to save time and make more money, so much the better.

I'm in a very small firm. Is a package a good decision for me?

Yes. The investment permits a practitioner to spend his/her time "thinking" or "analyzing" versus building.

I'm in a very large firm. Is a package a good decision for me?

Yes. The investment permits the firm to achieve many objectives, including a quality-controlled approach for everyone conducting valuation work, a training tool for new staff, a facile "show and tell" tool,⁹ and application to many assignments beyond valuation. Also, see the preceding answer.

A self-created Excel-based worksheet may make sense for very large firms with substantial financial resources. However, they must still address the question regarding the nature of their business, i.e., valuation or software?

I complete only a few valuations each year. Is a package a good decision for me?

Yes. The investment in a package avoids the inevitable job "warm up," since the package's navigation tools guide the practitioner through the same process each time. Thus, it permits a practitioner to spend his/her time "thinking" or "analyzing" versus building. Further, it enhances quality control since the structure accommodates consistent approaches.

I complete many valuations each year. Is a package a good decision for me?

Yes. The investment in a package saves considerable time and accommodates more persuasive conclusions. Thus, it permits a practitioner to spend his/her time "thinking" or "analyzing" versus building.

What is the learning curve in a valuation package?

I have assisted several practitioners who transitioned to valuation packages from self-created Excel-based worksheets. Their common reply is that after completing about three valuation assignments the learning curve was overcome, and they cannot conceive of ever being Excel-dependent again.

What if I need to customize the package?

The package we use permits custom worksheets to accommodate virtually any need.¹⁰ For example, we have customized forensic indices such as CRO¹¹ and other tests to evaluate the quality of client historical financial reporting. The indices are the same ones we use in our forensic work. However, in valuation we seek to establish economic benefit stream quality pursuant to normalizations and forward-looking estimations.

What if opposing counsel asks me during deposition or cross-examination whether I used a package?

When opposing counsel asks me that question, I tailor my answer to the opposing expert. If I have a high regard for him/her, I will reply similar to, "Yes, I have used a package for many years since my client prefers for me to spend my time analyzing instead of building worksheets." I then explain the inherent advantages of packages versus self-constructed Excel worksheets.

I may also state (depending upon the perspicacity of opposing counsel) that, "Not using a valuation package is akin to preparing income taxes with a paper and pencil." In most cases, opposing counsel quickly moves to another topic.

CONCLUSION

Author guidelines prevent me from naming the package we use. Besides, my objective is to assist practitioners in

improving their practice rather than touting a valuation package. Nonetheless, I will gladly discuss the package we use (and alternative packages) with readers as I have done for many others. That is important because not all packages are created equal— some are downright "dangerous"— particularly in the wrong hands.

Nearly every practitioner I know desires to do the very best valuation work possible. The right valuation package will add a significant enhancement to an existing valuation practice, and permit practitioners to execute better work, make more profit, and gain market share. 

¹ The *Journal of Accountancy's* annual review of tax preparation packages listed eight separate tax software products.
² Today, there are about two or three vendors who offer about a half-dozen packages. This estimate does not include those do-it-yourself on-line "tools" claiming to execute a valuation conclusion for you.
³ Richard B. Lanza, CPA, "Preventing Errors and Fraud in Spreadsheets," <http://accounting.smartpros.com/x48253.xml>.
⁴ Raymond R. Panko, Human Error Website. (<http://panko.shilder.hawaii.edu/panko/HumanErr/>). Honolulu, HI: University of Hawaii (2009a).
⁵ Raymond R. Panko, "University of Hawaii, What We Know About Spreadsheet Errors," <http://panko.shilder.hawaii.edu/SSR/My Papers/what-know.htm>.
⁶ Family Limited Partnership.
⁷ DRE: "Dorrell's Rules of Estimation" for software assignments. It states that when a time/money estimate has been applied to a software design/development project reality is best established by first, doubling the cost and second, raising the time to the next increment. For example, if a spreadsheet project is estimated at five weeks and \$75,000, the likely actual result will be \$150,000 completed in 10 months.
⁸ The respective code selected applies throughout the entire assignment, including industry-specific build-up data, guideline transactions, comparative analysis such as RMA, control premium/minority discount application, et al.
⁹ We have often conducted client work sessions and courtroom testimony demonstrations of the package contents. It provides a means to quickly educate non-valuation types, and where permitted, enables sensitivity testing to demonstrate the magnitude of differences in every variable. Further, it illustrates our commitment to excellence.
¹⁰ The vendor will also build the worksheet for a nominal fee.
¹¹ Cash Realized from Operations - the primary test for financial statement manipulation.
¹² For example, the Internet offers a handful of "DIY" (do-it-yourself) packages where anyone can enter a few numbers, and "voila," a valuation will be printed for them. Cost ranges from about \$150 to a few hundred dollars.