# PivotViews Whitepaper

Introduction

PivotViews is a general-purpose reporting tool. It currently works with any SQL Server database. The sample reports provided for evaluation are based on Microsoft Dynamics GP, which is currently the primary focus of their marketing efforts. A few reports were based on Microsoft's AdventureWorks demo database, to demonstrate that the product will work with any database.

PivotViews delivers reports in one of two formats: "Table" reports similar to Excel worksheets, and "Pivot" reports, similar to a PivotTable in Excel. I will be discussing these two types of reports, comparing them to their Excel cousins. (PivotViews also supports Crystal and SQL Server Reporting Services reports through report viewers. This review will not focus on those topics.)

Search/Filter list of reports
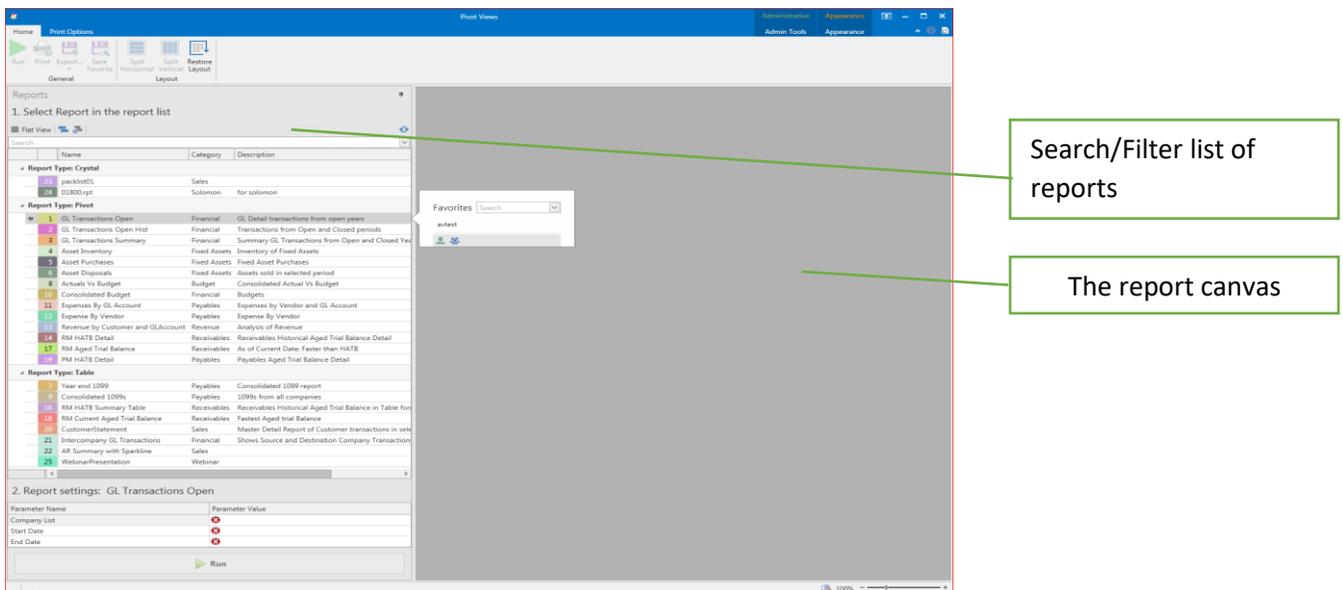
The report canvas

The opening screen

PivotViews opens with a list of ready-to-run reports on the left side of the screen, and a blank report canvas on the right. Users select a report in the list, provide parameter values required by the report and "Run" it.

Results are delivered on the report canvas. Users can drag and drop report fields on or off the report canvas, or rearrange the fields as needed. Pivot Reports (like Excel pivot-tables) have Row, Column and Data areas, whereas table reports have only rows and columns.

I have been evaluating PivotViews for the past few days.   There's a lot to like, and a few criticisms too.

Overview

The report canvas showing two reports side-by-side. The report list has been tucked into the margin

PivotViews' Pivots are almost exactly like Excel's pivot tables. They are so similar that users who are familiar with Excel's pivot tables should need no additional training.

Like Excel, PivotViews allows you to filter by any field or fields, even if that field is not displayed on the report. But in PivotViews only, an additional pre-filter can be used to remove data before it is delivered to the pivot table. This is an advanced feature that might be useful in some circumstances. None come to mind easily.

Table reports are similar to Excel worksheets. Of course, since this is a report, users cannot actually enter or modify data. But users may add any number of calculated fields and rearrange columns easily.

A Master-detail Table report can contain multiple levels of Child rows that can contain related data, like a mini database. Users can expand parent (master) rows to see child (detail) rows. Detail rows may in have their own child rows. This type of report can be useful to show financial activity such as a statement of activity – say, invoices and related payments.

A Master-detail report showing three levels of data

Adding calculated fields to an Excel pivot table is possible but only a small subset of advanced users are familiar with it. Most users – if they are aware of the feature in the first place – don't use it because they find it daunting. In PivotViews, a better "Add Field" window, complete with color-assisted syntax checker, makes this much easier -- putting it in reach of an average user.
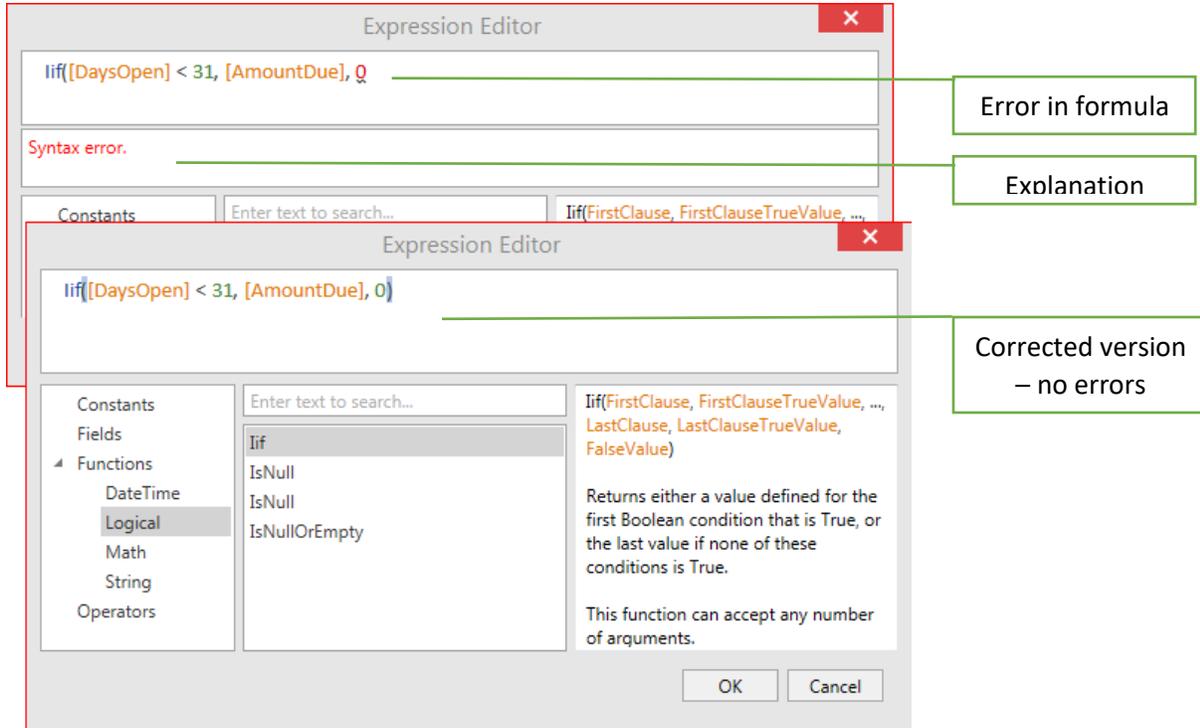
Expression editor for calculated fields

Calculated fields are easily identified on the report canvas – they're italicized. The calculation formula shows up in a bubble when the cursor hovers over the calculated field header.

Sorting and Grouping: PivotViews goes further than Excel in this area because it supports custom grouping and sorting. Users can, for example, sort or group a column/field based on values in another column/field! Users can create their own custom rules or formula for grouping and sorting, then assign that custom group or sort to any field.

Conditional Formatting is available in both Pivot Reports and Pivot tables. An Excel Pivot table requires you to select values to be formatted and then return to the home tab to access the conditional formatting option.

In PivotViews, conditional formatting is available simply by right-clicking on any field in the report.

Finding reports

Keeping track of Excel PivotTables (actually, Excel documents in general) is a problem of its own. Workbooks are often named inconsistently and then put into folders that are hard to locate when they are needed.

With PivotViews, all your reports are presented in one list that includes report-name, description, report-type, and other information. You can search report names and/or descriptions, and within a report, you can even search for "Favorites" by name (see below for more about Favorites).

Report names can be color-coded to highlight. Reports can be "pinned" to the top of the report list, allowing for quicker access to frequently run reports. (Each user has their own list of pinned reports)

In PivotViews, when the user has developed a new layout (by rearranging rows/columns, creating new calculated fields, etc), the resulting layout can be saved as a "Favorite" for later re-use.

The next time the report is selected, the list of favorites is displayed (every report can have its own set of Favorites, as many as desired). The user can optionally choose a favorite, which can be exactly as originally saved (including layout and parameter values). Or the user can choose to use different parameter values (e.g. different from/through dates) and create a new report using these parameters – presented in the layout

In other words, it's easy to re-run reports and to reuse a Favorite layout with different data.

Printing

PivotViews allows for flexibility on what is printed. The logo, company name, and user can be added to the report simply by clicking yes to an option. PV also allows you to display the parameters for the report.

Adding this information to excel is cumbersome – the user would add some of this information to the header or footer, while others may be in the spreadsheet itself. Adding a logo to the header or foot in Excel is an advanced skill.

Exporting

Exporting reports for use with different systems or applications can be problematic. PivotViews offers a wide variety of formats, which should cover the vast majority of requirements.

The export options that are available to you in Excel strongly suggest to be exported as a PDF. Other options that are available are basically versions of Excel extensions. The MHT and the HTML option are not available.
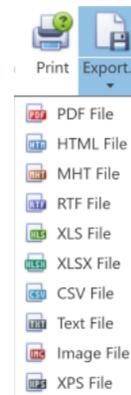
Adding New Reports
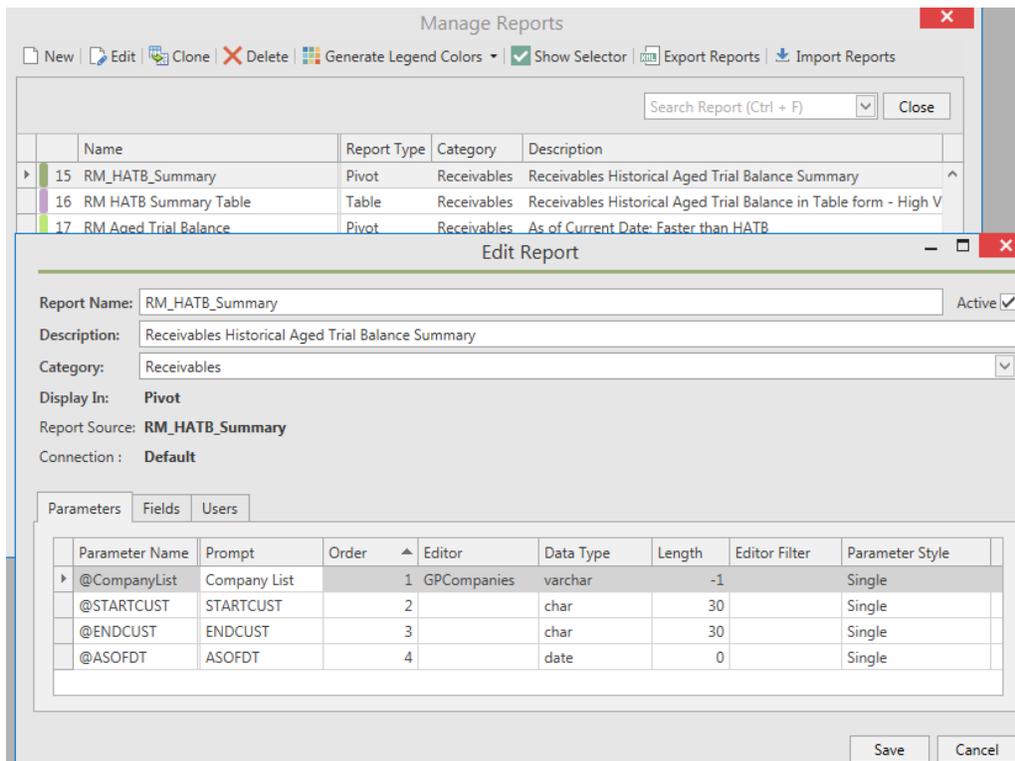
Adding New or editing report definitions

PivotViews provides a wizard-like window to help users add new reports. A series of steps walk the user through the steps. PivotViews relies on SQL stored procedures to provide data for the report. It gets the parameters required by the stored procedure, displays the fields, and user access rights in a few easy steps.

Reduce Administrative Load

In ERP operations, quite often the information is downloaded to programs such as MS Excel to allow for the creation of Pivot tables and other reports. This can be quite time-consuming and requires advanced Excel or software knowledge to accomplish.   PivotViews makes Table and Pivots easily available to the user. This will free up time for administrators and other technical staff.

Display and compare other reports

PV will let the user open SSRS and Crystal reports - it will pass login credentials and parameter values programmatically and display those reports in viewer right on the PivotViews report canvas. These viewers do offer search and navigation within the report, users may print and export results just as they would if they normally would.

Users can not modify the report in any way. Cannot change the layout or add new calculated fields. Users can save and reuse parameter values as Favorites with Crystal or SSR reports, just as they would natively with Pivot and Table reports.

Excel will not display any reports except for Excel reports. To compare Excel reports to other reports you would need to use an entirely different reporting platform, which may have its own login requirements.

Overall, Here Are Some Things I Really Like

- Convenience. It has a library of ready to run reports. There is a lot to be said for having a named report, with an optional description, that can be used for searching and filtering. Even if your report list is long, it's easy to find the one you need. Customizable lookup lists and calendars for date entry make it easy to enter report parameter values. Favorites, a way to store and reuse parameter values and layouts, make it easy to run a report.

  You don't have to know anything about creating pivot tables or how to get the data or how to refresh the data. It just works. Those who are comfortable creating pivot reports will appreciate the simplicity of this. They may find that they are able to do all their analysis within PivotViews – breaking the typical tiresome cycle of "export report data, import into Excel, do analysis, repeat if anything changes".

- Speed. Of course, network and database capacity are critical to the performance of data-dependent applications. The reports I worked with were rendered fairly quickly, even those involving more than 100K rows.

  Once the data had been retrieved and the result was available to me, the analysis was exceptionally fast. Rearranging the layout, adding calculated fields, etc all happened nearly instantly – and this response would not be affected by any network or database constraint; it's all done within the application.

- Flexibility and Customization: With each report, the user can add, remove or reorder fields, filter the data, add calculated fields and conditional formatting, group, sort, export data. Custom sorting and grouping, an advanced topic for many users, is among the best I have seen.

- Security: Users must be granted permissions to each report. The list of reports available to a user is limited by the access list. Users don't even know if other reports exist (notwithstanding what they might have seen on another user's report list)

- Miscellaneous: Pinned reports, Color-coded report tabs, side-by-side reports, hiding the reports list to expand the report canvas are nice-to-have touches. I might not use color-coded tabs myself but I can see it being useful to others.

- ***You never have to start with a blank slate.*** Even a brand-new report has a default arrangement. You might not even need to make any changes. If you do, it's much easier to change a report in front of you than it is to create something completely from scratch – which is what you must do every time you make a new Excel pivot-table.

Criticism

While the ability to add logos to reports is nice, PivotViews offers little in the way of customizing the print output. A tabular report is the only option. What you see on the screen is what you get when printing. It would be nice to have the ability to change printed layouts as easily as the report-results themselves can be changed. There is no way today to create a mail-merge type report straight from a report.

Charting functionality is rudimentary at best and at times clunky.

When discussing this with the development team, they acknowledged its shortcomings and promised to deliver improvements in the next version.

Conclusion

PivotViews and Excel PivotTables are comparable, offering many of the same analysis features.

Where PivotViews really shines is in creating or modifying reports -- adding calculated fields, changing report layouts, saving/re-using these layouts, and rerunning reports with different parameter values.

It's also nice to have all your reports in one place (instead of trying to remember where that Excel PivotTable that you liked is located). The ability to be able to search in one location for a report name or part of a report name would be a big time-saver.

Finally, an important advantage that is worth emphasizing is that in PivotViews you always start with a basic report that can be customized – never a completely blank slate. When creating a PivotTable in Excel, after clicking on Insert > Pivot Table, I have seen numerous users staring at a blank screen not knowing what the steps are to create a PivotTable.

Bottom line: If your data resides in SQL Server, and if you want control over your report layouts and the ability to easily analyze your report results interactively, I encourage you to try PivotViews.

Barb Henderson, principal of Barb Henderson Consulting LLC, an Alberta based firm, has been consulting since 1996. Her experience has included data analysis and training. She has been involved in the roll-out of new custom software applications primarily in the role of documentation and staff training. In the last three years, she has focused on Microsoft Office and primarily Excel, and is regarded as an expert by many.
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