Insights: Excel Automation in Financial Services

A significant requirement in any business is to have variety of reports to be created and e-mailed on a set frequency regularly. Microsoft Excel is a very powerful tool that enables users to capture, process, present and report data in meaningful ways. Microsoft excel spreadsheet and models are predominantly used across wide range of processes, from Investment research & Portfolio management to currency trading & loan processing and for about everything in all business processes. As financial services companies have traditionally relied on Excel as a reliable tool for these purposes and in the process have amassed huge data as well as developed/evolved their business processes. At many places, many of the components of these business processes are manual in nature, ranging from data capture, manipulation to generation of reports. Excel automation allows these processes to ascend next level of organization maturity by systemizing many of these tasks at the same time reducing the rate of error and data accuracy significantly

There are several types of automation tools provided in the Excel Programming, which help the users to execute complex business tasks within fraction of seconds and ensure better outcome. Excel Macros is among the most highly ranked tools, which ensure systematic automation of jobs within limited time frame. These days lot many of market data platform & custom internal applications have been developed to imitate or substitute Microsoft excel over years, but still excel remains arguably the most widely-used mission-critical application for financial services industry professionals.

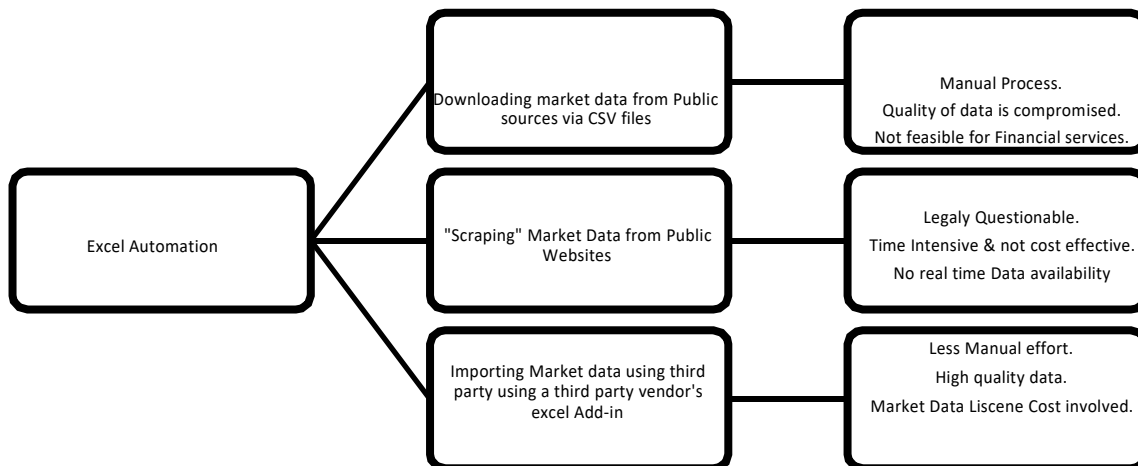## Benefits of Excel and Business Process automation

1) Organizing & Data Comparisons - Organizing and data comparison can be easily done using the Excel programming power giving benefits one after the other. Excel programming applications allow the user to organize the lists and collate without any hassles. It also becomes far easier to analyze and separate the rows and columns of data and bring phenomenal changes in the way and manner business can be conducted.

2) Automated Daily status Reports - Excel as the ideal office and business automation application engages daily status reports, monthly forecasting, or sales task. The updated Excel reports provide business the very importance about making informed decision and that too within limited time frame. Expert excel programmer can take power of excel to the next level where the applications turns out to be a genie.

3) Dashboards - Excel based dash board helps in bringing marvelous change in the business performance and as the result decision making process can be done quite efficiently. Excel based Dashboard reporting brings with it, superb reporting power and you can easily create and maintain the dynamic reports. It is through the dynamic reports that you will be able to navigate through the data as well as compare the data from different sources. Dynamic reporting in excel also helps in the comparing the data from several other sources over the timeframe. In short, Excel can bring complete change over in the office processes.

Market Data Case Study

The diagram below depicts an example case study around three ways that are commonly used to import market data in Microsoft excel:

```
                    ┌─────────────────────────┐      ┌──────────────────────────────┐
                    │ Downloading market data │      │ Manual Process.              │
                    │ from Public sources via │──────│ Quality of data is           │
                    │ CSV files               │      │ compromised.                 │
                    │                         │      │ Not feasible for Financial   │
                    │                         │      │ services.                    │
                    └─────────────────────────┘      └──────────────────────────────┘
┌──────────────┐    ┌─────────────────────────┐      ┌──────────────────────────────┐
│              │    │ "Scraping" Market Data  │      │ Legaly Questionable.         │
│ Excel        │────│ from Public Websites    │──────│ Time Intensive & not cost    │
│ Automation   │    │                         │      │ effective.                   │
│              │    │                         │      │ No real time Data            │
│              │    │                         │      │ availability                 │
└──────────────┘    └─────────────────────────┘      └──────────────────────────────┘
                    ┌─────────────────────────┐      ┌──────────────────────────────┐
                    │ Importing Market data   │      │ Less Manual effort.          │
                    │ using third party using │──────│ High quality data.           │
                    │ a third party vendor's  │      │ Market Data Liscene Cost     │
                    │ excel Add-in            │      │ involved.                    │
                    └─────────────────────────┘      └──────────────────────────────┘
```

Downloading market data from public sources it's a very much time consuming & error prone method as one has to download dozens of files from various sources with manually copying & pasting in your system. The data needs to be updated regularly which is again a troublesome task, particularly for processes such as investment analysis or risk reporting where you need to have real time value of the assets. Due to which this method is not preferred by financial services industry much.

Scraping market data from public website is a legally questionable method that involves creating automated process to extract the data from public resource which generally violate the data issues for different websites. As we know that time to market is very much important for assets managers, but Scraping is a time intensive process which again does not provide Real time data availability. The data totally depends on the source from which it is scraped. Additionally there is always a risk of formatting changes that make scarping not a very reliable automation method.

Importing data via vendor's Microsoft Excel add-in (e.g. Bloomberg add-in) is most preferable than above methods, as there is less manual intervention needed and data is of superior quality. Apart from these benefits the data available are real time data which is very much valuable for financial service industry. To access market data via Excel, vendors typically requires you to purchase market data terminal licenses, despite the fact that you may only need the data within Excel.

Maturity capability Matrix

The level of excel automation adopted and used in an organization is directly proportionate to its maturity. We have looked at many clients and prospects that have adopted business process automation and have come up with following capability matrix:

Overkill	Justify	**Matured**	Business Process Automation
Justify	**Growing**	Consider	Excel Automation
Initial	Catch up	Laggard	Manual use of Excel
Low	Medium	High	

On the horizontal scale is the maturity of an organization (things like AUM, number of employees, IT infrastructure, business processes, Software capabilities, Vendor eco system) and vertical scale is the data processing approach an organization has adopted. At a broad level there are three levels of capabilities an organization can develop;

A. Manual use of Excel – this is the most primitive level where organizations have used Excel to store, process and report data. Typically in the start-up phase of an organization they resort to this kind of approach, which normally last until they grow to tens of employees at which point they consider to the next level:

B. Excel Automation – In this phase, organizations focus on optimization, data accuracy, faster processing and standardizing business processes. They still rely on Excel as a primary business process tool but with some degree of automation ranging from data capture, manipulation, validation, and reporting.

C. Business Process Automation – As organizations grow more than 100 or so employees, they soon find Excel approach (even with automation) unsustainable. Main disadvantages include inability to be used by multiple people, operational risk by not storing data in systematic fashion. They are left with this approach where they must systematically store data in some repository, standardize data points as well as business process and implement data processing using ETL tools and higher level languages like Python, C#, Web Services, SSIS et al.

Conclusion

In the end, there is no one size fits all solution that can be envisaged but one has to take in to factor the maturity of their organization like number of clients, employees and their IT skill set, associated vendor eco system they've in place to chart their own strategy and embark on to a journey that can be very rewarding if done right.

About ConvergeSol

ConvergeSol is a premier industry focused technology consulting company that specializes in providing outsourcing services for financial services industry and Small / Medium Enterprises. Our offerings include:

Custom Software Development

Automation Solutions - Data Warehousing, Excel Automation, Automated testing, Custom software development, CRM
Reporting Solutions
Portal Solutions - Microsoft SharePoint Solutions, Web Portals.
Integration and Customization Solutions – Order Management systems, portfolio accounting systems, CRM, Work flow management etc.. for 3rd party products like Backstop, Charles River, Palladyne, Advent and Relativity.

Product Development

Product Management
Software Development
Quality Assurance Solutions.

Managed Services

Application Lifecylce Management Offerings, a one stop end-to-end solution perfect for organizations looking to use IT to their advantage, low touch and lower costs.
Operations and Support offering.

We bring deep expertise in understanding your needs be it order management system, enterprise content management, portals, account opening process or reconciliation process just to name few areas. We complement it by our proven execution expertise across entire software life cycle: project management, business requirement, software development, quality assurance, deployment and support.

For more information, please contact us at:

Phone:	+1. 212.899.5148 (USA)
	+1. 732.485.9207 (USA)
	+91. 823.899.0929 (INDIA)
	+91. 890.546.6278 (INDIA)
Email:	info@convergesolution.com
Web:	www.convergesolution.com