Technology Developments That Will Likely Have the Biggest Impact in 2022.

Executive Summary

This executive guide provides an overview of several major technology developments underway and those that will have the biggest impact on treasury and payments now through 2023. The content is an extension of the conversation between Jonathan Paquette and Craig Jeffery during the Treasury Update Podcast *(2022 Outlook Series: Payment Predictions).*

Changes Making an Impact.

What are the implications of technology developments on treasury and finance? What technologies and financial ecosystem changes are most likely to have a greater impact on finance and treasury in 2022 and 2023?

» **Smarter criminals.** Fraud is increasingly harming organizations, as criminals are heavily leveraging technology and adapting their behavior for optimal results.

» **Open APIs.** These programs allow for simpler connections between internal systems or between vendor and bank systems.

» **Richer data.** Expanded data sets and superior data formats allow for more data to be shared and allow systems receiving this data to be more resilient and enabled.

» **Cloud migration.** Nearly all technology is moving to the cloud. Large-scale ERPs are moving from on-premises installations to cloud services. This includes large on-premises players, from SAP to Oracle, along with new ERP providers who started in the cloud.

» **Machine Learning/Artificial Intelligence (AI/ML).** System capabilities to detect patterns are expanding across the vendor world, impacting fraud detection services, forecasting accuracy and overall capabilities, and quality control functions.

» **Power of networks.** The value of networks is often attributed to their size, interoperability, and the services they can provide. This will increasingly impact payment security and payment efficiency in the near term.

The Interaction of Business Shifts and Technology Developments.

Smarter Criminals, Machine Learning, and the Power of Networks

Criminals continue to expand their repertoire of attacks, which continue to scale in magnitude, along with their use of automation and sophistication. The acceleration of several existing trends in technology will be more fully leveraged to combat cybercrime across the enterprise.

» **Machine learning.** The use of machine learning has already been deployed to help companies and banks detect anomalous behavior. Anomalous behavior is a common denominator in fraud situations. The automated methods of identifying and pausing transactions that require a closer look will grow more rapidly over the next few years due to the cost/benefit opportunity becoming increasingly clear to more companies.

» **Power of networks.** The use of validation services for payments has been growing and is reaching an inflection point. That will continue. Another 'network' option leverages the power of a payment community to add to the defensive arsenal of companies that make payments. Knowing that others in the network have been making payments to a particular entity and a particular bank account offers another way of confirming that your instructions or information is correct.

» **Smaller fraud.** We don't expect the frequency of fraud to decline. Given the use of technology to thwart cybercrime, it is logical that some criminals will work harder to ensure that some fraud activity flies below the radar. By flying below certain thresholds, they will expect to create repeat successes before the company is aware of the situation or incident. This is a natural expansion of the attack methods of a smart and sophisticated adversary.

ERP Movement to the Cloud: Internal and External Connectivity

Newer ERP entrants are all cloud native. The major ERP players are in the midst of converting their client bases from installed software to the cloud. This inexorable movement toward the cloud is touching nearly every category of systems, not ERP vendors alone. These newer platforms are more easily able to support connectivity on a broader scale. For connectivity and access to data from an ERP perspective, this represents a significant step-function of far more capability.

» **Internal connectivity.** While the mantra for ERPs is to absorb the world of financial processes and eliminate other systems, this is rarely possible. The vast majority of companies operate with internal and external ecosystems. The ability to connect more seamlessly to internal systems and data, whether fully cloud native or simply hosted in the cloud, means better visibility and interoperability. This supports the best-of-breed mindset and reality given today's technology.

» **External connectivity.** Pulling in rates, curves, data points, bank balances, and transactions allows internal systems to more thoroughly support the analytical and operational responsibilities of finance. This more highly connected ecosystem allows for increasingly rapid and accurate decisions and workflow cycles.

Enriched Data: Formats, Information, and Insight

The continuing perspective that full visibility is a business essential has been extended to include a time component. Prior day has given way to current day. Current day appears to be sufficient for the majority of organizations currently. The need for real-time data is gaining attention and being used more regularly as the growth of APIs among banks and fintechs increases. The push for more frequent and faster continues in one direction: towards real time. In the next few years, the availability and ongoing demands will drive the increased timeliness of full visibility. However, real-time information isn't the only change happening with data.

» **Improved Formats: ISO XML.** Formats that can carry additional information are more valuable to companies. This information can be used for operational purposes such as cash posting or accounting. It can also be used to better forecast cash flows, as additional variables allow forecasting tools (e.g., ML) to better detect patterns.

» **Data as the New Gold.** It is well understood that firms that manage data more effectively perform better than their peers. Making better decisions and gaining access to information more rapidly hold significant advantages for companies. This data can be used within existing systems for functional improvements. It can also be poured into the company's data lake for broader analysis and insight.

The Gig Economy and the Broadening Impact of APIs on Processes and Relationships

No one wants slower. The gig economy caused some adaptation and the emergence of new use cases for fast payments. Uber, in its quest to recruit and retain drivers, moved to offering payments as often as the driver wanted instead of just weekly. The driver can trigger payments up to four times per day. Whether this seems extreme to the reader or not, the capabilities are there in our lives as consumers. This changes expectations. These expectations can now be met, at least technologically, through the use of APIs. Here are some other areas where the power and speed of APIs offer up other opportunities.

» **Bank account opening.** Know Your Customer (KYC) is the biggest compliance pain point for companies and banks. The fact that some of the more sophisticated banks and fintechs are creating a more digital account opening process will certainly provide the necessary elements to support significant adoption over 2022 and beyond.

» **Visibility and cash application.** Loading bank transactions into a treasury platform has long been a requirement. APIs will certainly support that ongoing trend. However, the ability to use APIs to instantly provide balances in any corporate system is now simplified. API use for cash application and other sharing-of-information use cases will grow rapidly over the next two to three years.

» **Collaborative relationships.** The allegation that fintechs are disruptors who will disintermediate banks has been adjusted. Certainly, fintechs can be disruptors. However, both banks and fintechs seem heavily focused on cooperation, efficiency, and extending service levels and services. APIs allow for this by enabling the connection of services, functions, and data in far simpler manners than legacy connections could afford. Thus, connecting best of breed fosters greater connectivity and collaboration rather than the 'monolithic system takes all' approach from the past. This partnership model looks to continue heavily over the next year and into the foreseeable future.

» **Open vs. closed.** Open technology has been winning the competition against closed technology and ecosystems. This trend will continue and accelerate in 2022 and beyond.

Forecasting: More Details and the Definition of 'Normal'

More details allow for more accurate forecasts. Disruptive times caused by economic disruptions or a global pandemic can create challenges in our forecasting models.

» **More details.** For accurate forecasting, companies need to aggregate data for optimal results. The results of aggregating and analyzing 30% of data will look different than when reviewing 100%. The technological environment more companies find themselves in allows for comprehensive analysis of all relevant data.

» **Abnormal details.** However, given that we have spent two years in the midst of a global pandemic, many organizations have had abnormal business activity during this term. The return to normal may mean a different normal or may be reflective of what was the case in 2019. Whatever the situation and however forecasting is managed, prognosticators would do well to account for the non-standard business environment we have been in for 24 months and ensure that a broader tolerance level is factored in.

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