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OFAC Interdiction Vendors and Technology: A Widening Gulf

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Highlights

- "OFAC technology" usage is expanding beyond pure OFAC requirements to encompass a wider range of regulatory and business interdiction requirements for banks and other institutions in the United States and abroad.
- The USA PATRIOT Act, greater regulatory expectations for technology use, the globalization of OFAC technology, and OFAC's "name and shame" program have revitalized and expanded the US domestic market for OFAC technology.
- There is a widening gulf between the needs of top-tier and large wholesale banks and those of midtier and smaller banks. And there is a clear dichotomy between vendors that offer tools and technology to satisfy OFAC regulations in real-time integrated payments environments or large-scale account processing environments and those that offer OFAC account scanning or checklist capabilities.
- Vendors to top-tier and midtier banks are most likely to choose the integrated compliance solution model, as it relies on comprehensive OFAC functions and real-time connections with banks' payments and messaging systems.
- While larger banks are expanding their use of OFAC technology to address a wider range of interdiction needs, for a higher volume of transactions originating both in the US and abroad, smaller banks are seeking to address OFAC requirements and USPA account opening requirements. The high end of the market is concentrating on real-time payments interdiction and performance, and the low end on compliance with OFAC anti-money laundering (AML) regulations.

Introduction

Complying with the regulations of the Office of Foreign Assets Control (OFAC) of the US Department of the Treasury has long been a major concern for US banks involved in global clearing and settlement of high-value payments. The first OFAC interdiction software was introduced in the early to mid-1990s to the large-bank market for monitoring high-value funds transfers for potential OFAC violations. Today, although the global payments business is still the dominant user of OFAC technology in most wholesale banks, usage has expanded from monitoring of high-value payments to other areas of the bank and to nonbank financial institutions (FIs).

The USA PATRIOT Act (USPA) has attracted an influx of new vendors into the financial services market, while at the same time traditional vendors are enhancing their OFAC products to meet FIs' transactional, account opening, and account verification needs. In the payments arena, "OFAC technology" usage is expanding beyond pure OFAC requirements to encompass a wider range of regulatory and business interdiction requirements for banks and other institutions in the US and abroad.

This TowerGroup Research Note looks at the types of OFAC offerings available in the market and how the market and products are changing, and highlights major vendors providing OFAC payment interdiction technology. A companion TowerGroup Research Note, 037:44P, "OFAC Interdiction: A Vendor Overview," presents a more detailed review of 10 primary vendors. For an introduction to OFAC regulations and compliance requirements for the payments business, refer to TowerGroup Research Note 035:12P, "Freezing the Assets of Evil: New Developments in Foreign Assets Control Regulation." See also TowerGroup Viewpoint Issue 38, "The USA PATRIOT Act and OFAC: Myths and Realities," and Research Note 022:06W, "Regulatory Compliance Solutions for US Wholesale Banking Funds Transfer: Keeping Up with OFAC."

Market Overview

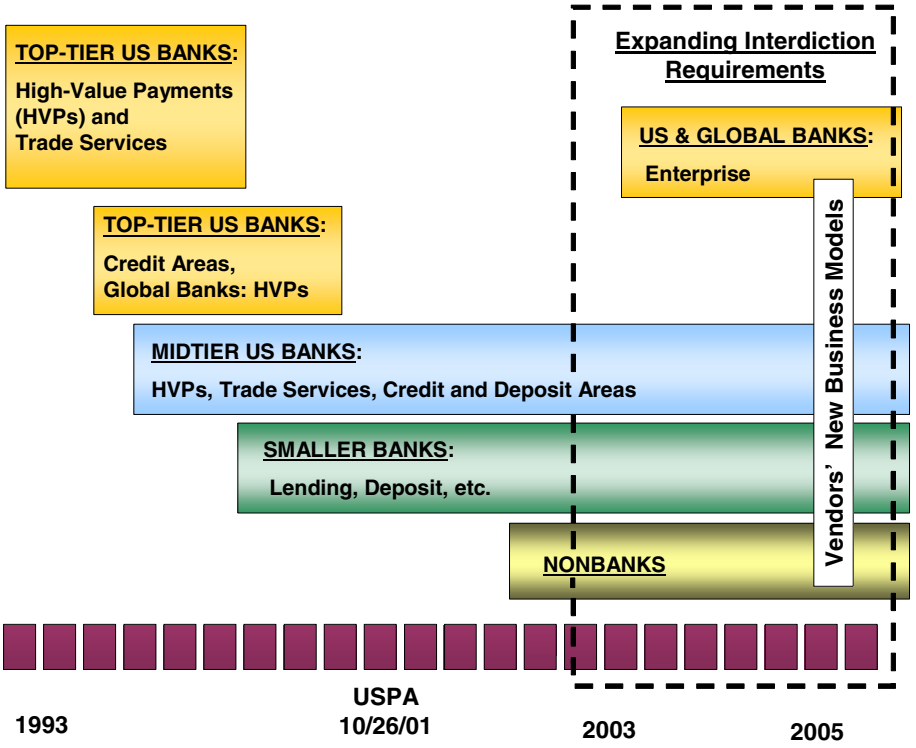
The market for OFAC filtering technology includes all types of financial institutions, although banks and other depository financial institutions represent the dominant segment due to their long history with OFAC regulation. TowerGroup estimates that upwards of 95% of purchases of such technology made prior to 2002 were by banks or third-party providers serving the banking community. Although OFAC's mission and requirements for banks have remained unchanged, neither the environment for OFAC technology nor the technology itself has remained static. The USPA, greater regulatory expectations for technology use, the globalization of OFAC technology, and OFAC's "name and shame" program have revitalized and expanded the US domestic market for OFAC technology.

The largest wholesale banks have historically been the primary consumers of OFAC technology because compliance with OFAC regulations is vital to their mission-critical payments businesses and real-time monitoring of payment messages is standard for them. For banks with appreciable global business, the volume and velocity of transactions are too high to make manual checking tenable from either a risk or a cost perspective. In response, technology vendors have developed a variety of automated solutions to assist banks in their efforts to maintain full regulatory compliance. At the high end of the market, real-time OFAC solutions are tightly integrated with payments, messaging, trade services, and accounting applications, and for the most part, have not been replaced. After rapid initial growth in the US in the mid-1990s, growth in this segment has been slow, although large wholesale banks continued to acquire OFAC software elsewhere in the bank. Today, many of these banks have multiple OFAC products due to implementation of point solutions (both transactional and account related) by separate lines of business and due to acquisitions and mergers. In addition, global clearers may have different filtering products from the head offices. (The reverse is also true: Foreign bank operations in the US have OFAC filtering solutions, while their headquarters' locations may have no solution or a different solution.) Now, however, as interdiction is becoming more critical and more global, vendors of top-end OFAC interdiction systems are improving their products to capitalize on the augmented needs of the largest banks for standard enterprise-wide solutions with greater capabilities.

Midtier commercial and smaller domestic banks have awakened to the need for technology. Growth of OFAC technology among these institutions, historically slower than for wholesale banks, has increased markedly as a result of the terrorist attacks of 9/11 and the USPA. OFAC's own initiatives are also having an effect. Among midtier banks, systems that provide both transactional and account functions are gaining traction beyond the wire room, where OFAC requirements have typically been met by high-value payments processing systems. Growth among smaller banks is primarily account related. Rapid growth is also taking place outside the bank market, large insurance companies being a case in point. (See Exhibit 1 for a timeline of OFAC traction.)

Exhibit 1

Timeline of Adoption of OFAC Technology



Source: TowerGroup

While larger banks are expanding their use of OFAC technology to address a wider range of interdiction needs for a higher volume of transactions originating both in the US and abroad, smaller banks are seeking to address OFAC and USPA account opening requirements. The high end of the market is concentrating on real-time interdiction and performance, and the low end on compliance with OFAC and anti-money laundering (AML) regulations.

Markets Shape Business Models and Products

Market changes are driving new business models as vendors position themselves to capitalize on the USPA requirements for terrorist list verification, information sharing, and enhanced due diligence, with a mix of capabilities and components. Some of the new models include

- **Integrated compliance solutions.** US vendors that had both OFAC and Bank Secrecy Act compliance products are positioning their products as integrated compliance solutions, offering OFAC, AML list verification or information sharing (e.g., using their OFAC interdiction software to filter other deny lists or databases pertinent to USPA due diligence, country risk, and government agency request considerations), and USPA Customer Identification Program (CIP) capabilities — or some combination. (Integration in this context "guarantees" a common architecture and platform but does not guarantee integrated functions. Rather, it is a generally a modular solution to compliance requirements.)

- **Customer identity verification offerings.** The USPA CIP requirements have spawned a host of identity verification and validation products, most providing OFAC technology only for account verification purposes. The OFAC functionality ranges from name/address lookup to more powerful filtering. A few vendors offer free OFAC name checking to sell their other products and services.
- **Risk management solutions.** Some vendors are positioning OFAC verification within broader risk management and/or fraud control solutions. Here again, the focus is primarily on accounts, and the solutions are aimed most often at lending and deposit areas within the bank.

Vendors to top and midtier banks are most likely to choose the integrated compliance solution model, as it relies on comprehensive OFAC functions and real-time connections with banks' payments and messaging systems. Most pure-play OFAC vendors have already moved to this model. FircoSoft is a major exception. Sybase is another exception, having broken a trend among enterprise AML vendors by leveraging its integration capabilities into the interdiction area for OFAC instead of allying with an existing vendor.

The different models are causing some confusion in the marketplace, particularly among smaller institutions, and the account-focused solutions are beginning to experience some commoditization as banks struggle to understand vendors' competing solutions. There have been three major acquisitions of OFAC/AML vendors since mid-2003 as vendors build out their models and product lines. ChoicePoint acquired Bridger Systems; Bankers Systems, which markets products from Attus Technologies, acquired Atchley Systems; and ATTUS Technologies was itself acquired by CSI. Vendors with an established track record and a broader product offering appear to be best positioned.

OFAC Technology Solution Types

OFAC regulations require banks to perform three major activities: (1) monitor payment (and other financial) transactions, (2) examine new accounts, and (3) undertake periodic review of customer information file (CIF) data to ensure compliance with OFAC's sanctions programs. Today OFAC technology is available, and within the price points, to meet these requirements for any size institution, and there is a general expectation among regulators that technology will be used. However, vendor solutions differ substantially depending on the market served, the technology used, and whether a solution is a real-time engine for transaction filtering or is account focused.

Stand-alone Products

Because OFAC compliance is essential for high-volume global payment clearers and for other US banks making or receiving international payments on behalf of corporate customers, vendors of high-value funds-transfer processing systems all provide integrated OFAC monitoring capabilities. However, the vast majority of OFAC solutions are stand-alone products. Products are available to meet all three types of compliance activities named above, although many are focused on account opening and CIF requirements. (Exhibit 2 outlines solution types by compliance purpose and market.)

Exhibit 2

SolutionsTarget Different Functions and Market Needs

Solution Type	Payment Transaction Monitoring	CIF Verification	Account Opening
Stand-Alone Solutions			
Real-time system	Global USD clearers Large US banks, Foreign banks in the US	n.a.	n.a.*
Batch processing	Large and midtier banks for ACH and other payment files Smaller FIs for HVPs*	All size FIs, although smaller banks often use hosted services	Large and midtier banks
Interactive (manual) verification	Small community banks and credit unions	n.a.	Community banks and credit unions
Integrated Funds Transfer System			
Real-time system	Restricted to vendor's customer base: mostly "top 200" banks	n.a.	n.a.

n.a. = not applicable

*Some vendors can scan CIF files and accounts in real time, but there has not been a market need to do so. "HVP" is high-value "wire" payments.

Source: TowerGroup

Real-Time Systems for Top-Tier FIs. Vendors of real-time solutions targeted to top-tier institutions offer rich product capabilities to meet these banks' needs for real-time filtering of transactional data — both payments and messages. These solutions also offer batch-filtering capabilities for CIF and less time-sensitive electronic payment files (e.g., Automated Clearing House). Solutions are based on robust "OFAC engines" that combine sophisticated filtering algorithms with high-performance processing. Because top-tier banks have zero tolerance for missing a real match and strong needs to identify matches quickly, high-end systems use sophisticated tools to lower the number of false positives (transactions erroneously identified as matches to the OFAC list) and to manage identified exceptions. Vendors in this category differentiate their products based on the investigation, administration, and workflow capabilities delivered through the user interface as well as the sophistication of their filtering algorithm. All products also support interactive queries. The technology used to interface to transaction systems varies, but MQSeries technology is common. Straight-through processing (STP) and minimal disruption of payments and messaging activity are critical requirements. Relatively few banks review wires on a batch basis, but such review is becoming more common, at least among nonbanks, and some banks are filtering ACH files, although here again, usage is still limited. The user interface can be Windows based or Web based.

Real-Time Systems for Midtier Banks. Historically, vendors to midtier banks provided OFAC interdiction systems that operated on PC-based systems or local area networks (LANs), but now they are moving to Web-based systems. Like the providers to global banks, these vendors have capabilities for

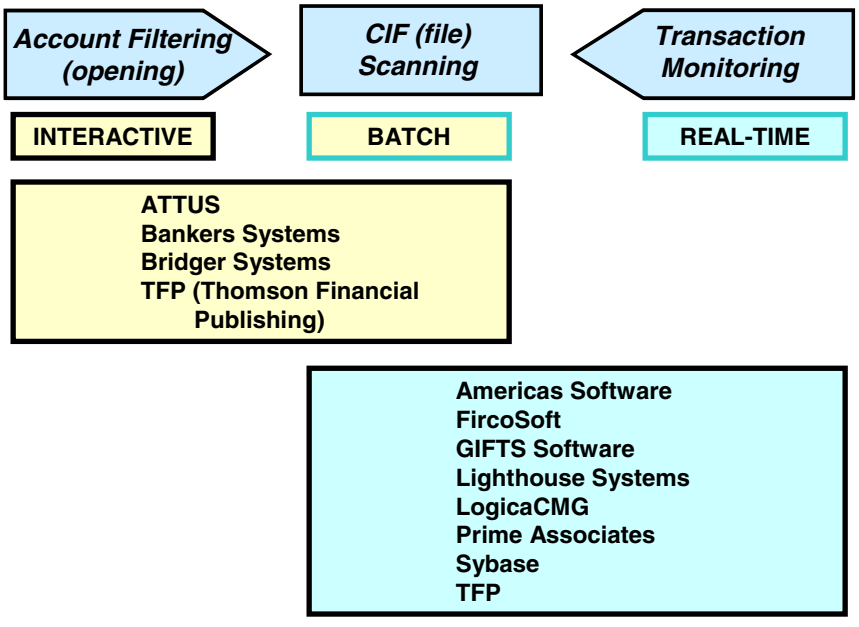
real-time filtering of payment messages and batch processing for CIF verification, and they provide interactive capabilities for account lookup. Customers' wire volumes, however, are lower than those at top-tier banks, and there is less need for integrated multibank processing and functions across a large enterprise. Products provide tools for administration, management of potential matches, and reporting, and the user interfaces tend to be less complex.

Account-Focused Solutions. There is a great deal of variation in the capabilities of account-focused solutions, which range from the simple to the robust. The largest providers of account-filtering systems provide their products across the financial services market, with the highest adoption by midtier and smaller banks. For vendors that target larger commercial banks, the primary difference between their products and those of transactional solutions is that they do not offer real-time filtering capabilities and are therefore found in lending areas and other nontransactional areas within the bank. These products are designed for batch CIF file filtering and interactive account scanning and do not interface with real-time transaction systems. (However, parties to a funds transfer could be checked on a case-by-case basis and payment files could be scanned if there were an interface to the transaction system.) For interactive verification, operators must manually input the information (name, address, and sometimes country or other identifier) to be filtered to receive a confirmation that the entry is clean or a notification of a potential match. The simplest lookup systems, while a step above manual checking against a printed OFAC Specially Designated Nationals (SDN) list, could leave a bank with some basic gaps: Hits must often be exact, and OFAC's sanctions programs requirements may not covered by the software.

(See Exhibit 3 for a list of selected vendors of stand-alone solutions.)

Exhibit 3

Selected Vendors of Stand-Alone OFAC Products by Activity and Solution Type



Source: TowerGroup

Integrated Funds Transfer Products

Major domestic vendors of funds transfer core processing systems provide OFAC filtering as an integrated part of their baseline product. Vendors typically use proprietary filters and databases but often allow client banks to use other filters or lists. (Major vendors to US banks are shown in Exhibit 4.) These systems support operator review of potential "hits" and interfaces to payments and messaging, blocked transaction, and other bank systems. Solutions targeted to global payment clearers and large wholesale banks offer robust filtering, exception management, and administrative capabilities for all payments and messages passing through the processing system. From a transaction processing perspective, products are comparable to the best stand-alone solutions and have stringent security and audit controls. Some vendors offer both integrated and stand-alone systems, although the latter are often part of a more generalized compliance product set and provide account and CIF filtering in addition to transaction-monitoring capabilities.

Exhibit 4

Selected Funds Transfer Vendors: Filtering Technology

Vendor	Filter	Product Name	Supports Third-Party Filters/Lists
BankServ	Third-party (Bridger Systems): integrated	n.a.	Yes
Fundtech	Proprietary: integrated	n.a.	Yes; (CHIPS, Thomson, any delimited file)
GIFTS Software	Proprietary: integrated and stand-alone (1993, 2000)	GIFTSWEB EDD OFAC	Yes; uses only third-party lists
IntraNet	Proprietary: integrated*	STOP	Yes, filters and lists (CHIPS, Thomson, any delimited file)
Logica	Proprietary: integrated and stand-alone	HotScan	Yes; (CHIPS, Thomson, any delimited file)

n.a. = not applicable

*STOP functions are not sold stand-alone, but transactions originating outside IntreNet's funds transfer product could be run through its OFAC engine.

Source: TowerGroup

Services

Several OFAC providers, as well as core processing outsourcers, provide CIF verification services for banks on either a one-time or periodic basis. Convenience and cost are key considerations for many banks that are looking for ease of use, reporting, and minimal exception management. For small banks, lack of expertise and resources is an issue. Application service provider (ASP) services provide an easy method for account opening and CIF verification for OFAC and USPA identity verification purposes. With the availability of Web services, some vendors firms are offering ASP services for account and CIF scanning. Such products might also be used for payments (e.g., for checking parties to a funds transfer), but vendors are not specifically targeting this area. (See Exhibit 5 for a list of selected vendors providing services.)

Exhibit 5

Selected Vendors Providing Hosted OFAC Services

Vendor	Service Offered	Channel
Attus Technologies	CIF filtering and account lookup	Service bureau (CIF only) and Web
Bankers Systems	CIF filtering and account lookup (Q1, 2004)	Web
ChoicePoint PRG/Bridger Systems	CIF filtering and account scanning	Web
TFP	CIF filtering and account scanning	Service bureau and Web

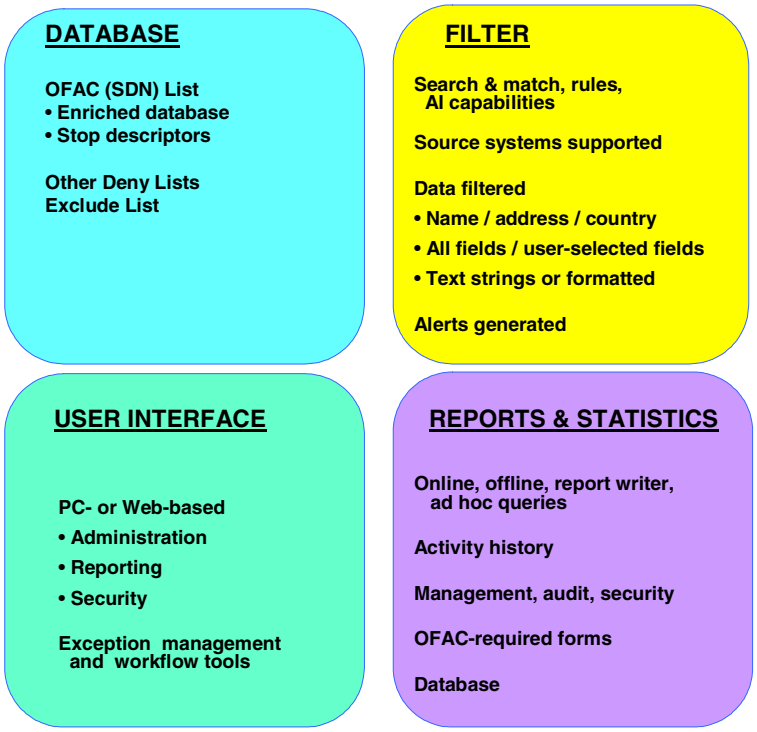
Source: TowerGroup

Product Components

The basic components of an OFAC system are fairly standard. As Exhibit 6 shows, they comprise (1) the OFAC database, (2) filtering technology, (3) user interface, and (4) reports and statistics.

Exhibit 6

Components of an OFAC System



Source: TowerGroup

It is important to note that OFAC engine vendors may allow users to select whatever OFAC (or other) list they choose. All but the simplest interactive search and inquiry "lookup" tools require an interface to filter transactions or account data files from source systems against the OFAC database. (For a more detailed description, see TowerGroup Research Note 022:06W, "Regulatory Compliance Solutions for US Wholesale Banking Funds Transfer: Keeping Up with OFAC.")

The Database

OFAC's database of *Specially Designated Nationals and Blocked Entities* (SDN list) is the heart of an OFAC product. For lookup products, this list is often used as is. Many vendors create proprietary databases by scrubbing the data for consistency and enriching it with misspellings, alternate spellings and typos, synonyms, word conversions, compound words, and transliterations as well as by adding entries or identifiers to satisfy OFAC sanction program requirements (e.g., countries, cities, FIs, organizations, and individuals, and other identifiers). TFP (formerly Thomson Financial Publishing) and The Clearing House issue two of the most widely used lists, enlarging the OFAC SDN list from about 3,500 to more than 10,000 and 8,000 entries, respectively. Other vendors are agnostic as to the OFAC list used and build some of these capabilities into their filtering algorithms. Virtually all nonlookup products support user-defined "good guy" or "exclude" lists of cleared entities to be bypassed in the filtering process and "deny" lists of entities that should always be stopped. (Deny lists can include "stop descriptors" and, here again, can be built into filtering rules.) Some products, particularly those serving bank trade services departments, include other US government agency deny lists. (With the advent of the USPA, the number of lists to be filtered has increased for AML rather than OFAC purposes, but vendors often tout these lists in their OFAC capabilities.) List update timing and delivery mechanism vary by vendor, although vendors to large-volume banks tend to provide new lists within one day of OFAC changes.

The Filtering Technology

Filtering technology is a major differentiator of OFAC products. Filtering capabilities range from simple name-checking functions to complex algorithms that can search and interdict formatted and unformatted text data from multiple payment and messaging systems with a high degree of accuracy. The simplest filters offer "exact hit" matches to the SDN list. Robust filters use a variety of techniques to ensure that true negatives are not missed while seeking to reduce the number of false positives — often using fuzzy matching or artificial intelligence (AI) capabilities to detect matches, even relating abbreviations in a message to names of OFAC database entities. High-end "OFAC engines" offer sophisticated filters that identify all possible matches while reducing false positives, confirm the reason and location of the hit within the transaction or message, and provide tools to compare the hit to the entry in the OFAC database. These products can bypass certain entities as well as always stop certain entries (e.g., bank employees). Products that allow user-defined exclude lists or rules provide functions to retain these changes from one OFAC list update to another. Some filters allow the bank to choose the fields within a given payment source (e.g., incoming wires or SWIFT messages) to be filtered, which substantially reduces processing time. The algorithm can also be applied to other lists that a FI wants to review for AML, fraud, or risk management purposes. (See Exhibit 7 for various filtering criteria.)

Exhibit 7
Search Type Comparisons

Search Type	Performance	False Positive Rate	Error Risk*	Flexibility
Exact lookup	High	Low	High	Low
Stop descriptors	High	High (without rules)	Low	Low (without rules)
Phonetic match	High	High	High	Medium
Fuzzy logic / AI	High	Low	Low	High

*Risk of not identifying true hits.

Source: TowerGroup based on input from Bridger Systems

The User Interface (UI)

Simple inquiry-based products don't require robust UIs, but other products, particularly those for large-volume payment operations must provide a high degree of usability and sophisticated tools for exception management and investigation as well as administrative tools for list management, rules creation, security setup, management reporting, and audit. On the whole, it is the exception management tools that are key. The most time-consuming and costly task in running an OFAC solution is the handling of identified exceptions to determine which are false positives and ensure that they are eliminated from future matching, and to manage true hits. Technology differentiates itself to the extent that it can catch true hits while minimizing false positives and can provide robust tools to investigate identified potential matches. Several products have graphical tools for statistical and trend analyses, and Web-based solutions are becoming more common.

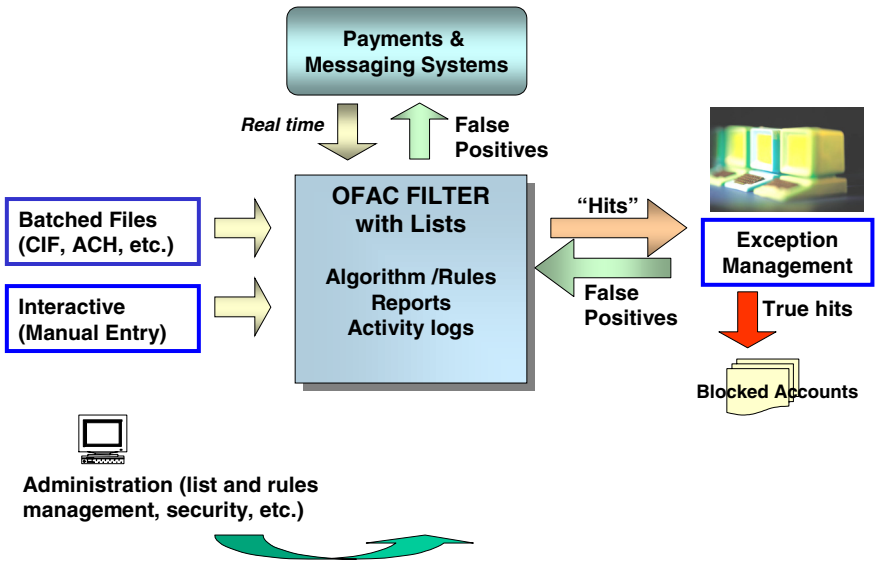
Reports

Vendors provide a variety of online or offline reports for investigation, management reporting, security, and audit purposes. Standard reports include summary and detailed reports on search results (cleared, blocked, or rejected items), security and audit logs, list updates, and database reports, including external and internal deny and user-defined exclude lists. The data included varies, but date, time, user, criteria, and list are common. In simpler products, reports may be limited to a record of items checked and possible match results, and for lookup tools, there may be no reports at all. Some products generate the incident reports and the annual summary report required by OFAC.

For a flow chart of a typical OFAC system, see Exhibit 8.

Exhibit 8

Flow Diagram of an OFAC System



Source: TowerGroup

OFAC Technology Trends

Historically, therefore, OFAC products were differentiated only in several basic ways, with the largest banks requiring the most comprehensive products. The basic criteria were as follows:

- Sophistication of the filtering technology
- Usability of the user interface and capabilities for exception management, administration, and security
- Number and usefulness of system-generated reports and statistics
- In some cases, the extent to which the OFAC SDN database can be enriched

These distinctions remain fundamental to an assessment of OFAC products. However, given the changes in the marketplace, other factors are becoming important and are driving new product and technology responses. (These drivers and responses are enumerated in Exhibit 9.) These emerging factors, too, depend on the size and sophistication of the type of bank targeted.

Exhibit 9

Trends and Vendors' Technology Response

DRIVER		TECHNOLOGY RESPONSE
Single service provider	→	Integrated product line, generally wrapped with professional services and/or training
Generalized interdiction (not just scanning of the OFAC list)	→	Single filter to scan many lists; integrated multiple-database scanning, including "scan all" function with identification (and detail) for multiple matches
Globalization of OFAC	→	Functionality for non-US banks to filter the OFAC lists and US banks to filter non-US lists for AML and other purposes
Enterprise solution	→	High-performance multibank systems, often with hub/spoke capabilities for list or database filtering, investigation, administration, and security with central (single-server) processing and control
High performance	→	Subsecond response time for real-time transaction monitoring; high-speed batch scanning; advanced (AI) algorithms to produce false positive rates of less than 1%
The Internet / Internet technologies	→	Web-based solutions that combine faster list updates and product enhancements with ease of use

Source: TowerGroup

Pretty much across the board, whether for top-tier payments clearers or smaller banks, there is a trend toward a using a single provider for OFAC and all OFAC-related needs. The response by vendors has been development of integrated product lines, whether for account-based identity verification and risk management needs or for real-time OFAC filtering in conjunction with AML compliance solutions. There is also a need for more generalized interdiction, to scan other deny lists in addition to the OFAC list itself as institutions add their own lists of fraudsters, at risk accounts, or even employees. Among US wholesale payments banks, there is a globalization of OFAC technology usage to accommodate demands from entities other than OFAC. This includes UPSA enhanced due diligence requirements and requirements from other nations and jurisdictions. The same is true for foreign banks making USD payments on behalf of their customers or needing interdiction solutions for local sanctioned entity lists. Larger banks are also looking for enterprise OFAC interdiction solutions with multibank capabilities that can deliver real-time and high-performance processing for payments and very large CIFs, often in a distributed hub-and-spoke environment. (Larger banks also have greater systems integration, hardware, and network requirements.) The Internet not surprisingly is also having an effect on OFAC technology, allowing vendors to offer Web-based products and services to banks and other FIs of all sizes.

Because of their unique requirements and increasing payments volume, large payments processing organizations look for such key attributes as

- Robustness of the interface to high-value payments, messaging, and other systems
- Real-time processing of large volumes of high-value funds transfers

- False positive rates less than 1%
- Rapid filtering of batch ACH, wire, or other bulk payment files (something that is becoming important with the advent of international ACH and will increase when SWIFT FileAct comes into use)
- The ability to scan data from different origination systems separately or concurrently against multiple database lists

Many of these factors will drive more powerful algorithms and make exception management an even more important issue than it is today in order to drive down costs, identify true exceptions, and decrease minimize disruption to payments STP. Exception management tools are also critical on the account side, especially for nonbank FIs like insurance companies that have huge CIFs.

Conclusion

There is a widening gulf between the needs of top-tier and large wholesale banks and those of midtier and smaller banks. And there is a clear dichotomy between vendors that offer tools and technology to satisfy OFAC regulations in real-time integrated payments environments or large-scale account processing environments and those that offer OFAC account scanning or checklist capabilities. Although many vendors provide account verification, a few large providers dominate the account filtering space. The number of vendors that are capable of satisfying the complex demands of large banks for enterprise transaction filtering can all but be counted on one hand.

TowerGroup

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