

Why You Need To Worry About Check Security

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Introduction

Check fraud has been an ever-present risk for decades, but it was in the 1980s that the fraudulent use of checks began to skyrocket steadily. Depending on who you ask, the causes range from the growing availability of professional printing and design hardware/software to the fact that the penalties for check fraud are relatively light compared to other forms of robbery while the potential income can go into the millions.

For the average business operating an integrated iSeries 400 environment, debating the reasons for increased check fraud is immaterial. The question is how much risk does their business face?

The fact is that check fraud has reached epidemic levels with losses ranging between \$10 and \$14 billion per year in the US alone. These statistics help illustrate the scope of the problem:

- A recent Nielsen Report projects that the number of checks written annually will rise by two to four percent through the year 2020. At the same time, more than 1.2 million worthless checks enter the payment system daily.
- According to Ernst & Young more than 500 million checks are forged annually, with losses totaling more than \$10 billion.
- According to a report issued by the American Banker, an industry bankers magazine, estimates of losses from check fraud will grow by 2.5% annually.

Like many other white-collar crimes, check fraud continues unabated because most companies don't think it can happen to them. Or, even worse, they think their company has all the safeguards it needs...without actually testing or updating them. This is just as true for iSeries 400 shops as any other technology platform.

When you boil down the many reasons for such massive (and increasing) levels of check fraud, you ultimately arrive at the following conclusion: Check fraud flourishes because there's an abundant supply of companies who make getting away with it easy.

The purpose of this document is to provide anyone concerned about check fraud with the introductory information they need to take a long, hard look at their current security measures. We'll examine different types of check fraud, the elements of check security, and provide suggestions for increasing security at both the software and hardware level.

This document will be especially relevant to the many companies who have moved check printing and production in-house or any company that is considering such a move. As more companies take advantage of the cost, workflow, and auditing benefits of in-house check production, the need for enhanced security increases as well.

We'll also address the issues of cost and complexity. These two issues are reasons why check security gets pushed aside by many companies. In fact, the average company can significantly increase their security levels without inconveniencing and alienating honest customers, vendors, and employees, while simultaneously cutting overall costs associated with check production and printing.

Why You're at Risk - Check Fraud Defined

The good news is that there's a finite number of check fraud methodologies. The bad news is that each method can be spun into an infinite number of variations. Creativity and adaptability are the hallmarks of check fraud perpetrators.

In this section, we'll examine the basic categories of check fraud, but readers should keep in mind that check fraud rarely fits by-the-book definitions. Use these descriptions as a starting point in your security evaluation.

Alteration

Material alterations include any change made to the writing on a check without the approval of the account holder. This can include altering the dollar amount, payee, date, and so on. A popular form of alteration is "Check Washing". This method involves chemically removing fields from the check then adding false information in its place.

Forgery

Check forgery includes any check with a fraudulent signature or endorsement and it's one of the oldest and most successful forms of check fraud. This is because most forgeries use legitimate checks (either found or stolen), so the issue becomes spotting a fake signature rather than a fake check.

Check signature forgery can be divided into these sub-categories:

Tracing

Placing a legitimate signature over a check and then tracing and transferring the signature to the check using carbon paper.

Practice Forgery

This is the method you see on TV a lot. The forger practices writing a legitimate signature over and over until he can convincingly reproduce it on a check.

Non-Simulation

With this method, the forger makes no attempt to copy a signature. The fraud artist relies on a bank or company's lack of attention to detail.

Felt-Tip Marker

The forger uses a felt tip marker to camouflage distinctive signature characteristics.

Counterfeit

This includes any imitation of a legitimate check. Though, counterfeit checks do not necessarily need to mimic a specific genuine check. It only needs to look official or genuine. This method of check fraud used to be limited to the most sophisticated criminals. Today, with the broad and affordable availability of scanners, printers, MICR ink, check paper, and graphic design software, counterfeit checks can be produced with much less effort.

Check Kiting

Check kiting may occur in various ways and involve numerous financial institutions. The underlying premise is the criminal's ability to gain access to deposited funds before they are collected from the institution on which they are drawn. One reason why check kiting succeeds is because financial institutions often make exceptions to internal controls for approving drawings against uncollected funds, overdrafts, and wire transfers. This is because the majority of these exceptions do not involve fraud or translate to losses, so it becomes easy for bank employees and management to overlook the risks involved.

Check Security. Where To Start?

The above represents a popular sampling of common check fraud practices that victimize numerous businesses and banks every year. As mentioned before, variations to these common examples are limited only by the extensive creativity of the criminals involved.

Because check fraud is a crime with limitless possibilities, spotting fraud in progress involves equal amounts of skill and sheer luck. When it comes to preventing check fraud, the best offense is a good defense. Your goal should be to prevent or discourage any attempt at check fraud from the outset, rather than catch fraud in progress.

To do this, you must examine the four fundamental areas of physical check security and the security options available to you in each area.

Elements of Physical Check Security

Once you understand the four basic elements of check security you can decide which security measures will work in your particular industry or business.

Paper Security

Many physical security features can be incorporated into the manufacture of the check paper itself. Paper security features include chemical taggants, safety tints, specialty fibers & planchettes, security threads, watermarks, toner adhesion enhancements, and chemical sensitivity, among others.

Some of these features are incorporated as early as the pulping process and others in the paper-finishing phase. Paper security features mainly aim to either increase the paper's uniqueness (making it harder to scan, photocopy, or reproduce) or reveal any attempts at tampering using chemicals, erasures, or screens.

Design Security

Design security features focus solely on check graphics, text, fonts, and layout characteristics. Some design features discourage fraud overtly, while others are covert and only reveal themselves once the copy has been produced.

Decorative borders and background patterns both use detailed graphic designs to make checks harder to copy. A covert variation on background patterns is to also include machine-readable embedded data that appears to be part of the background but actually contains redundant check information or bar codes.

Another semi-covert feature is microprint which is text set in very small letters (only readable with a powerful magnifying glass) on the check. Microprint prevents reproduction because most photocopiers and scanners are incapable of capturing such small text, and yields only dashes and lines.

Features like security screens, split fountain, void emblems, and void pantographs are all covert features that appear either invisible or decorative on a genuine check, but when reproduced they disappear, reveal a hidden message, or reveal color gradation shifts.

Printing Security

Printing security measures are incorporated into the application of special inks and/or varnishes, or embossed print stamps to a genuine check. More importantly, printing security applies to the hardware and software you choose to design and produce MICR checks.

Secure check printing is critical because this is the level at which fraudulent checks can be produced on genuine check paper, using genuine inks, genuine fonts, and genuine signatures. In essence, a criminal who can hijack either your check printing software or your MICR check printer is capable of producing the perfect fraudulent check.

At a minimum, check printing software should be selected based on strict security requirements where user authority and access is easy to monitor, control, or change. Also, your check printing solution should be able to produce detailed check printing activity reports as well as Positive Pay reports to verify your check transactions with the bank. It's very important to point out that if a company cannot provide Positive Pay reports to a bank then the company is held accountable for the fraudulent check and it is not insured. So, if the fraud artist passes a check for \$1 million and the funds are transferred, the bank has no obligation to make reparations via insurance or any other means. But with Positive Pay reports, the company has a much greater chance of recovering the loss.

MICR check printers also need to be completely secure. Basic security features include password-protected access to the control display, lockable ink and paper trays, and only authorized users should be allowed to access and use the printer from their computer.

Ink security features range from the industry-standard magnetic ink used in the MICR (Magnetic Ink Character Recognition: these are the numbers you see at the bottom of every check) line to more advanced ink technologies. These include chemical taggants, colored inks, fluorescent inks, infrared or ultraviolet sensitive inks, and metallic inks, among others. Most of these inks reveal their special characteristics under certain conditions and are very hard to reproduce in any attempt at fraud.

Printing security also makes use of reactive inks that bleed, discolor, smudge, or reveal special characteristics when subjected to chemicals, water, heat, rubbing/scratching, or any other abusive treatment.

Miscellaneous Security

Paper, design, and printing security covers the vast majority of the protective characteristics that can be incorporated into your check production processes, but there are a small number of safeguards that do not easily fall into any of the above categories.

Heat or pressure transferred foil stamping, embossing patterns, special imaging (holograms, kinegram, pixelgram, etc.), all fall into this category and can be very effective deterrents. All of these features add another layer of protection against reproduction and discourage fraud.

Protecting Yourself - Selecting Secure MICR Check Printing Solutions

Once you've examined the many varieties of check security, the most obvious question is which features should you use?

The answer depends on your business, your budget, and your priorities. Generally, checks become more expensive to purchase and produce as you add more and more security features. While gauging check security is an inexact science, one existing benchmark is that your checks must have at least three industry-recognized security features before they can be registered with the Check Payment Systems Association and carry their fraud deterrent icon.

Perhaps the smartest place to begin examining check security is at check printing and processing. As mentioned before, this is the point at which you can take the highest level of control over who has access to your legitimate checks and therefore prevent the creation of "perfect" fraudulent checks. Cost and workflow benefits are the other reason why many careful companies rethink their check printing security processes starting at this point.

Unlike many forms of check security, using the best and most secure check printing solutions allow most businesses to save significant time and money. These savings can then help cover the cost of other required security features and very often there's still profit left over.

To select a truly secure check printing solution, certain software and hardware criteria must be fulfilled:

Software Criteria

Check printing software solutions allow users to create, customize, and map MICR check and direct deposit receipt designs that are ready to accept spooled output.

-User Authorities - The software should allow the administrator to define who can access design as well as print / merge functions. Top-level solutions also assign authority levels to different stored signatures based on check amount.

-Blank Check Protection - Prints 'VOID' if something other than the check amount appears in the check amount location in the spool file.

-Audit Logs & Positive Pay - Track all check printing activity including time, user identity, amounts, check numbers, and other detailed information. A check printing software solution must also produce Positive Pay reports used by banks when negotiating check fraud issues.

-Signature Security - Signature security includes the iron clad safe storage of scanned signatures as well as designating who has the ability to print checks using that signature. The best solutions allow signatures to be stored on removable devices that can be locked away if necessary.

Hardware

Hardware criteria applies almost entirely to MICR printer selection.

- **Encrypted Data Stream** - Adds encryption to the data stream between the terminal and the printer to protect against data interception.
- **Locked Access to MICR & Paper Trays** - It's imperative that the MICR printer you choose possess physical locks that prevent unauthorized users from tampering with paper and ink. Any other printer will need to be locked in a secure room during check printing operations.
- **Password Protected Control Panel** - This feature ensures that only authorized users can modify printer specs and functionality controlled from the printer itself.
- **Disables On Paper Jam** - When a standard printer jams, it automatically reprints the last page once the jam is clear. This function, when combined with MICR ink and printable check stock, presents the opportunity to steal the reprinted check page. Secure MICR printers disable completely when a jam is encountered, allowing only authorized users to reset the print job.
- **Added Signature Security** - Printers designed specifically for secure MICR check printing can connect to a Resource Bank or DIMM card containing stored signatures.
- **User-Defined MICR Timeout** - MICR functions are automatically disabled after a set period of inactivity.

Beyond Security - The Benefits of a MICR Check Printing Solution

As mentioned before, a top-quality iSeries 400 check printing solution does a lot more than increase security. It also yields significant benefits in workflow management, cost savings, and minimizes human error. Consider the following factors and implementing a check printing solution becomes a win-win scenario from any angle:

- **Eliminate costly and risky blank checks** - Many check printing solutions require that you purchase and store high-risk blank checks. That is, checks possessing all the printed fields and design elements including MICR lines, logos, blank numeric and written check amount fields, and sometimes even pre-printed signatures. In essence, all the hard work in creating a fraudulent check has already been completed. The check fraud artist simply needs to fill in an amount. Not only are these checks expensive to order, but having just one of these checks falling into the wrong hands can be catastrophic. Whereas the best MICR check printing solutions utilize unprinted check stock with absolutely no printed fields or design elements. The software generates everything from the MICR line to the company logo according to the users specifications. In addition, unprinted check stock is much cheaper to order and presents fewer security risks.
- **Print checks securely to remote locations** - A check printing solution that only works on local printers may be fine for a small business, but if you have more than one location then mailing checks can be both risky and expensive. A MICR check printing solution should grow with a company and that means having the ability to deliver secure print jobs to multiple remote locations.
- **Design and modify checks easily and efficiently** - Another reason why blank checks are expensive is that a simple area code change or company name/logo alteration can transform thousands of expensive checks into thousands of flimsy bookmarks. A check printing solution using unprinted check stock allows the user to design checks from scratch, and that means having the ability to make minor or major modifications in a few moments and at zero cost.

Quadrant Software and Troy Printers - End-To-End Security

Engineering secure, efficient, and cost-effective MICR check solutions is a top priority at Quadrant Software and our efforts decrease the potential for fraud and increase savings at numerous companies across the globe and in every vertical industry. With over a decade of experience and multiple industry awards, Quadrant Software's integrated suite of EDD solutions provide our customers with one source for all of their document management needs whether it's check printing, faxing, emailing, or bar code label production.

Our MICR check printing solution, Formtastic Checks, has frequently been paired with another best-of-breed hardware solution, Troy MICR Printers. So it's natural that Quadrant Software and Troy have a partnership allowing our mutual customers access to the best hardware and software solutions. Even better, Quadrant Software functions as a single point of contact for sales and support of both Troy MICR printers and Formtastic Checks.

Consider the following benefits of implementing both Formtastic Checks and Troy MICR printers in your iSeries 400 environment:

Formtastic Checks

Formtastic Checks combines tight security and complete flexibility in one easy-to-use MICR check printing solution. Utilizing inexpensive and low-risk unprinted check stock, Formtastic Checks gives the user the ability to design and modify all fields, features, and industry-standard check elements using a

straightforward, powerful GUI. Not only is Formtastic Checks completely secure, it's easy to install. **Formtastic Checks snaps in with zero programming.** Other Formtastic Checks benefits include:

- Reformat and map spooled data to create accounts payable checks, or generate payroll checks and direct deposit receipts.
- Securely print paychecks to remote locations to eliminate mailing costs and delays.
- Automatically add logos, signatures, MICR lines, and all other bank-required information for a fully automated check printing operation.
- Cut manual and blank checks on demand.
- Authorize who has the ability to print checks and create/edit the check layout.
- Designate signing authority levels for different signatures with increasing check amounts.
- Provides an audit log that automatically logs every single check that is printed by the software. It lists who printed the checks, when they were printed, the amount, the check numbers, and other detailed information.
- Generate Positive Pay reports.
- For additional protection, a secure signature storage option is available. This feature stores signatures on a removable memory disk that is inserted into a special reader during check printing runs. When the run is complete, the disk is removed and ready to be securely stored.
- Supports an unlimited number of bank accounts.
- Supports a wide variety of MICR enhanced laser printers including HP, Xerox, IBM, and Lexmark.
- Design checks to meet all banking standards without application modifications.

Troy MICR Printers

For over 30 years, Troy has specialized in products ranging from check printing systems to payment software for banks, insurance and brokerage companies, as well as corporate America.

The company's complete line of solutions includes specialized printers, other printing enhancements, and MICR toner. TROY provides a wide range of products in each product line, combining processes and feature sets to meet specific customer application requirements. As the largest manufacturer of desktop MICR toner in the USA, TROY provides specialty toner for laser printers as well as ribbons for impact products.

TROY's complete security printing solutions offer breakthrough innovations in fraud-deterrent security, unsurpassed quality and operational controls, as well as flexible integration, technical expertise, service, and support.

Quadrant Software also offers a wide range of unprinted check stock that includes various security features protecting against washing, scanning/copying, rubbing, and other forms of paper-specific fraud mentioned earlier in this white paper. By offering software, hardware, and paper/printing supplies, Quadrant Software allows our customers to research and implement a check printing strategy that is seamless and secure from end-to-end.

Conclusion

Check fraud is an increasing threat in the business community. Small and large companies are at risk and there's no technology platform that is immune to the threat.

While there's no 100% secure solution against check fraud, the people who commit this crime are opportunists that constantly seeks out companies that have let their guard down. Perhaps the best way to prevent check fraud at your business is to send out clear signals that your company is not an easy mark. This will discourage the majority of unscrupulous employees and career criminals.

As you've read, check security comes in as many varieties as check fraud itself. Picking the security measures that are right for your company will require careful planning and research. From both a budgetary and a security perspective, starting your evaluation at the implementation of a top-quality MICR check printing solution makes a lot of sense. Assuming you make the right choice, such a solution is easy to implement, increases security across the check production process, and saves both time and money.

If you have any further questions about check security as well as MICR check printing solutions, please contact Quadrant Software at 800-258-3399 or email sales@quadrantsoftware.com. You can also visit us online at www.quadrantsoftware.com.