

# SUCCESSFUL CASH MANAGEMENT AND PLANNING

Cash recycling and beyond



# Introduction

For all the talk of a cashless society through mobile payments and contactless cards, banknotes and coins aren't going anywhere. Trusted, symbolic and easy to use, cash remains a valid and preferred payment form all over the world.

For financial institutions, this attachment to cash is something of a double-edged sword. Drawing cash from ATMs or human tellers is one of the most common ways in which customers interact with their bank, which makes effective cash management a priority. But that customer interaction comes with its own challenges, not least the costs of keeping cash in circulation.

Technology developments such as cash recyclers and intelligent cash handling equipment can provide a solution to this problem. But as detailed in this paper, it is only a partial solution. Further reforms to processes and procedures are necessary for financial institutions to drive even greater efficiencies into their cash management operations.

In the following pages, you will see how an integrated service, consisting of cash-recycling hardware, cash-management software and effective modelling of individual branch effectiveness, can help financial institutions achieve significant savings through advanced cash planning. Furthermore, by adopting these technologies and advisory services as an integrated solution, financial institutions can make more effective use of their ATM networks, branches, staff expertise, and direct customer engagements. In doing so, you can optimize your operations so that more attention, innovation and effort can be focused on delivering their strategic goals.

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# The status of cash

Although certain countries, notably Sweden, have announced their intention to become a cashless society, the use of cash continues to rise, as a number of reports show. The numbers speak for themselves:

- 87% of Americans still choose to pay with cash<sup>1</sup>
- 92 billion cash withdrawals were made throughout the Eurozone in 2014<sup>2</sup>
- 60% of all payment transactions in the EU were made in cash<sup>3</sup>
- Cash use is predicted to grow by 1.7 percent a year between 2012 and 2022<sup>4</sup>

<sup>1</sup> BlackHawk Network: How America Pays, March 2016

<sup>2</sup> Retail Banking Report: Global ATM Market and Forecasts to 2020

<sup>3</sup> G4S: 2016 European Cash Report

<sup>4</sup> Federal Reserve Bank of San Francisco: Economic Letter, October 24, 2011





# The status of cash

There are good reasons for this continuing attachment to cash. Agis Consulting has conducted comprehensive research into cash usage worldwide, presenting its findings in *Cash Essentials: Beyond Payments*. Summarised below, these attributes are a strong indication that cash will retain its place in our economies for some time.

- **Universality.** Cash is available to everyone and can be used by everyone. It doesn't discriminate against groups or individuals; its availability doesn't depend on the development of costly new technological infrastructure; and it has immediate status as legal tender.
- **Trust.** Cash is recognised worldwide as a secure payment instrument, which is why it is also seen as a reliable fallback. It doesn't bounce, it doesn't get delayed, and it is the only form of payment that leaves no trace, ensuring privacy in increasingly non-private times.
- **Efficiency.** Cash is an efficient means of transferring value and it's easy for all parties to use. It is rare that cash transactions involve additional fees or deductions.

- **Emotion.** Cash is embedded in almost every culture from ancient civilisations onward. People tend to have a strong emotional connection to cash: it's part of the national identity and the way many learned to count. For small value payments, in particular, using cash is still the natural response for many.
- **Control.** Cash is easy to control. It is a physical representation of spending power and budget. A wallet of banknotes gives a much more accurate sense of wealth than the virtual possibilities offered by a piece of plastic.





# The status of cash

## Cash and the customer

Successful financial institutions have long understood the human connection to cash and have developed their services accordingly. The fact is that access to cash is the most fundamental—and most common—interaction between a bank and its customers.

The role of the ATM network is therefore critical. It is the means through which financial institutions can ensure the availability of cash and maintaining that relationship with customers. In 2015, the total number of cash withdrawals from ATMs reached 103.2 billion.<sup>5</sup>

*“Akbank’s customers expect our ATMs to be able to dispense cash whenever and wherever they need it. It’s crucial we meet their expectations as efficiently as possible. NCR APTRA OptiCash is a solution that’s helping us do that every day.”*

*— Mrs Firdevs Sismanlar, Delivery Channels Management Manager, Akbank.*

For financial institutions, the upside of this is that ATM withdrawals are significantly more economical than withdrawals made in the branch. In the US, the difference between the two can be as much as 18 percent. Technological improvements have been an important factor in keeping costs down, and will play a role in reducing costs still further in the future.

<sup>5</sup> Agis Consulting: Cash Essentials—Beyond Payments

For customers, the ATM is significantly more convenient—and has all but eliminated the frustrations of having cash available only during bank opening hours.

Nonetheless, there is a downside for financial institutions. The interpersonal connection between bank staff and their clients is diminished and customer loyalty is eroded. At a time when the competitive landscape makes that loyalty harder to win—and easier to lose—financial institutions must ensure that every customer interaction delivers an exemplary experience. That is as true of cash availability as it is of any other service the financial institution provides.





# Cash in context

ATMs are the public-facing element of the cash-based relationship between financial institutions and their customers. Behind the scenes, however, is an extensive cash management and cash planning operation that ensures ATMs can meet customer expectations.

Naturally, cash management does not take place in a vacuum. It is subject to a number of external and internal pressures and influences that can create significant challenges for the financial institution.

## External pressures

There are a number of interconnected macro factors that affect banking as a whole, and cash management in particular.

- **Regulation and central bank actions.** Many central banks have adopted cash distribution policies with a view to increasing the velocity of banknote circulation and the efficiency of the cash cycle, and there is a growing trend for central banks—in both developed and developing economies—to delegate the processing of banknotes to commercial banks or other operators.

Although this encourages greater cooperation between key stakeholders in the cash supply chain, it also requires central banks to increase their monitoring and supervisory role to ensure the quality and authenticity of cash in circulation—with regulations that define standards for fitness sorting, banknote authenticity, appropriate cash handling procedures, and reporting requirements, among others.

- **Inflation and interest rates.** Around the world, interest rates are still highly changeable as central banks respond to market forces. Despite the current general trend for low or negative rates, interest and inflation are still the most dynamically fluctuating elements to affect the value of cash held—as well as the net worth of a financial institution and the costs it faces. The cost and risk of holding excess cash can vary significantly over time. Those costs require on-going assessment against the costs associated with transport and depositing the cash with the central bank—and with the risks of having insufficient supply to meet customer demand.



# Cash in context

- **Economics and geography.** For financial institutions with international operations, cash management takes on extra complexities. As stated above, cash is universal, but regulations relating to cash vary by country—as do cultural attitudes to cash, credit, and debt. These can vary in times of economic stress or financial growth. Not only does a cash management strategy have to take into account cultural, commercial and regulatory differences, it needs to respond to changes as they occur.
- **Human behaviour.** One of the greatest challenges to effectively managing cash is the mutability of human behaviour, and the way that individuals respond to external pressures. Each new customer cohort has different expectations of all service providers—not just financial services—that are largely colored by early experiences. Therefore, basing cash management strategies on a single and consistent behavioural model can be a short-sighted strategy.
- **Technology, security and trust.** Finally, technology and the associated issues of security and trust can have a profound effect on the end-to-end cash distribution cycle. Cash recyclers have proved to be a powerful enabler of both the customer experience and effective operations, and can yield immediate cost benefits. But they also diversify existing infrastructures, and can introduce new costs and challenges. If these are not met, or if security is breached, then customer trust goes down.

## Challenges of the Cash Cycle

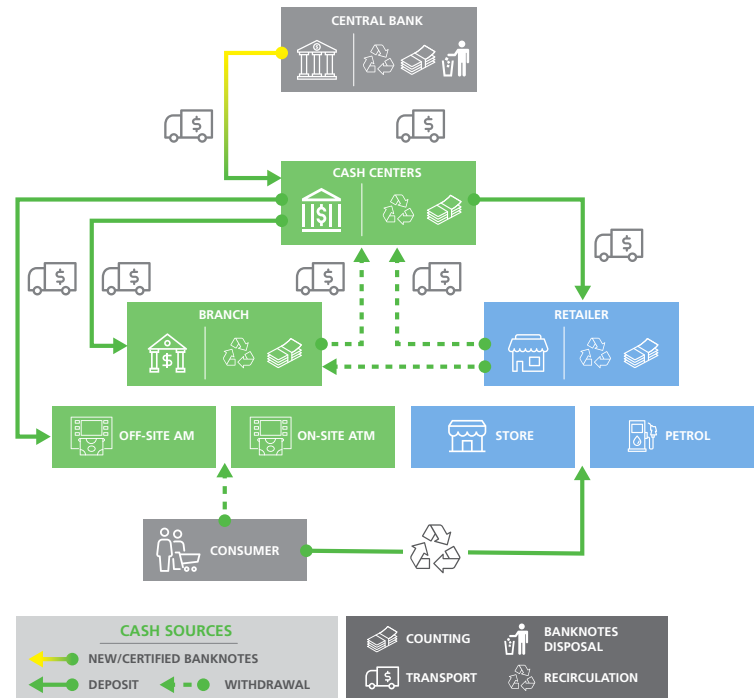


Figure 1



# Cash in context

## Internal pressures

To respond to these external pressures, financial institutions need an agile and flexible cash management process that can adapt rapidly to changing circumstances. However, internal barriers to flexibility include:

- **Inefficiency.** The traditional cash distribution cycle is inefficient. As Figure 1 (previous page) shows, it involves plenty of moving parts, which means there are also plenty of pressure points and potential sources of friction. Scaling this model up or down is far from straightforward.
- **Human error.** Lack of automation makes the cash management process more prone to simple human error. Approximately half of all banks today still rely on a generic spreadsheet to manage their cash planning. This can lead to risky over-reliance on a single individual or small group of individuals who initially developed and then maintain the spreadsheet. Without a more dynamic solution, financial institutions struggle to gain a full picture of their cash management requirements.







# Cash in context

- **Organization.** For some financial institutions cash management and ATM management are regarded as separate functions. Transaction management systems will also often create a further silo for debit card management. In these stove-piped operations, hurdles to more effective management are inevitable.

As a result of these internal and external pressures, cash management can quickly become a source of cost and risk:

- **Where under-stocking of cash occurs,** the customer experience is tarnished, and financial institutions become dependent once again on tellers to perform basic banking functions, compromising the efficiency of the branch.
- **Where over-stocking occurs,** banks face greater insurance costs, and the loss associated with cash remaining out of circulation. When banks are dependent on emergency replenishments, then cash in transit (CiT) costs and related insurance diminish profitability.





# Cash in context

## Overcoming the challenge

In order to meet their essential strategic objectives—namely, profitability, security and customer satisfaction—financial institutions need to modernize their internal processes and establish internal standards that lead to less reliance on generic spreadsheets and inefficient communication technologies, including email and even fax.

They also need to support these new processes by introducing appropriate technology that enables them to reduce the number of physical cash transfers between the various involved parties and minimize cash movement. In addition, processes and technology should work together to enable stronger collaboration with central banks and other third parties involved in the movement and management of cash.

To ensure that people, processes, and technology deliver the desired results, financial institutions should also adopt a consultative approach that looks at cash recycling and cash management as an integrated solution, rather than as standalone entities.

*“Today we are seeing many central banks impose strict regulations around the cash cycle. As a result of these initiatives, commercial banks are transforming branches to better manage cash re-circulation safely and in compliance with those policies. Banks have an opportunity to immediately save money through the introduction of recyclers and automation of the cash-handling process, but also through a closely aligned software solution that focuses on driving business value through streamlining processes to drive out hidden cost. NCR is in a great position to provide our customers with solutions that address these requirements.”*

— Edgar Rojas, General Manager Cash Solutions, NCR



# An integrated solution

Around the world, financial institutions have already started to see the benefits of deploying cash recycling technologies within their ATM networks. Many have also adopted cash management software, either alone or in conjunction with cash recycling programs, to derive greater insight into their cash planning operations.

However, the benefits that these solutions deliver can be greatly enhanced when deployed together as an integrated solution in conjunction with effective cash management consulting and optimization modelling.

## Cash recycling technology

Using cash recyclers can be a key enabler of a financial institution's core objectives. They offer a direct route to improving profitability, reducing costs, and improving the customer experience, while underpinned by enhanced security.

By automating the cash handling process, they enable financial institutions to reduce the time and resources spent on counting, re-counting, transporting and managing cash, and on trouble-shooting problems associated with under or over stocking ATMs.

In doing so, they can have a transformative effect on branches, enabling them to directly manage cash re-circulation safely, securely and in compliance with the relevant regulations and central bank directives.

The advantages of using cash recyclers can be divided into three clear areas:

- **Greater customer centricity.** Customers have quicker access to withdrawal and deposit services, while business customers can re-bank their cash efficiently and quickly. In effect, the cash recycler gives customers more choice on when, where and how they use banking services. At the same time, branch staff has more time to focus on engaging customers and improving valuable services because they spend less time on filling and monitoring ATMs.
- **Greater profitability.** Cash recycling lowers cash handling costs as well as reducing the amount of 'idle' cash. Financial institutions benefit from reduced operational expenditure and lower interest payments. Automatic cash recycling also reduces reliance on CiT services, and allows branch staff to focus more of their efforts on revenue-generating activity and increasing sales, and less on the mundane tasks of adding cash to ATMs. Finally, cash recycling has an important role to play in ensuring the all-important availability of ATMs, since they are taken out of service to refill the cassettes far less often.



# An integrated solution

- **Enhanced security.** All of this is underpinned by a greater level of security around cash management operations. With less human interaction with physical cash, there are fewer opportunities for mistakes to be made, and less potential cash skimming from infrequent ATM balancing. It also helps manage the considerable risks of having too much physical and idle cash on hand.

At NCR, our own experience shows us that customers using automatic cash recyclers reduce their overall operating expenditure by approximately 30 percent.

## Beyond hardware

Cash recyclers are a potent enabler of both the customer experience and effective operations that yield almost immediate cost benefits to the organization. However, as a transformative technology, they also bring substantial changes and, with them, new challenges to existing processes and infrastructure.

For example, deployment of cash recyclers raises questions around how best to manage deposit cassettes, how to ensure the right mix of denominations, and how to maintain a bank's ability to understand customer demand for cash. Inappropriate or poorly planned use of cash recyclers can result in banks simply replacing one set of costs and risks with another.



*“Cash recycling performs best when paired with a solid cash supply chain management strategy and capability to maximize the value of the technology.”*

— Large US Bank



# An integrated solution

## Cash management software

The second element of the integrated cash management solution is cash management software. The experience of NCR's customers shows that the savings made by deploying cash recyclers can be even greater when used in conjunction with effective software. On average, organizations save a further 20 percent when using cash recyclers as part of an integrated solution.

Our experience is borne out by analysis from industry commentators:

- PricewaterhouseCoopers suggest that banks can reduce the total cost of managing cash by up to 15 percent by using cash management software.<sup>6</sup>
- Consultants at Stolle and Heinz show that German banks could save nearly €1 billion (\$1.24 billion) or approximately 25 percent by using cash management solutions.<sup>7</sup>
- The ATM Industry Association suggests that effective cash management strategies could net banks an annual saving of between \$3,000 and \$10,000 per branch.

Cash management software can deliver these savings because it analyses transactions made through the ATM and the cash recycling network, and gives financial institutions accurate insight into customer interactions with cash and how those interactions change over time.

As a result, they can optimize cash replenishment cycles to meet those needs, and to understand what adjustments need to be made as customer demand changes.

Equally, financial institutions can use the insights provided by cash management software to maintain an optimal balance between customer self-service and teller-based service, and continue to derive the benefits of low-touch convenience on one hand, and value-adding interpersonal relationships on the other. In other words, cash management software helps branches avoid introducing new costs or inefficiencies when implementing a cash-recycling network.

<sup>6</sup> Strategy&: Improving the efficiency of banks' cash operations (originally published by Booz & Company, 2011)

<sup>7</sup> ATM Marketplace: ATM Cash Management 101, 2015





# An integrated solution

## Integrated Consultancy

A third element of integration is to look at Branch Effectiveness Modelling, a consultancy-led approach that ensures that the migration of transactions from teller to self-service models is suited to each individual branch.

No two branches are alike. They service different customers, with different demands, at different times. Branch Effectiveness Modelling helps ensure that the technology deployed and the transaction services delivered through automated technologies are appropriate for each individual branch. It is based not only on data analysis but also human observation of customer and staff behaviour to determine the most appropriate migration to ensure success.

Coupled with Cash Management Life-cycle Consulting, it provides a holistic view to cost-effective cash distribution and supply. Most financial institutions know that their cash management operations can be managed more efficiently, yet they are challenged to pinpoint where and how the improvements should be made.

Cash management consulting is the key to bringing together these often disparate challenges by applying best-practice principles that enable financial institutions to reengineer their cash management processes, resulting in cost reduction and increased operational efficiency.

In recognizing the critical importance of strategic alignment across the cash management value chain, end-to-end cash optimization means looking enterprise wide and building a dynamic cash management solution which is flexible as cash component costs change. By focussing on the end-to-end, enterprise-wide cash lifecycle, an integrated optimization solution can be developed which:

- Balances cash inventories against capital availability for investment
- Looks for alignment and opportunities to leverage branch and cash center staff
- Develops forecasting algorithms that balance cash demand across all cash point types
- Examines enterprise-wide complex forecasting functionality against historical trends
- Optimizes transportation scheduling, cost of cash and logistics costs



# An integrated solution

*“APTRA OptiCash is a critical part of our cash operations. We find the simulation features especially useful to project the cost impact and plan changes we make to our operations.”*

*– Zeljko Medved, Affiliate Members Manager, Erste Bank*

Thus, by integrating consultancy within the wider enterprise-wide solution architecture, the whole is greater than the sum of the parts. By treating cash distribution channels as an integrated continuum through a dynamic set of complementary solutions, optimization moves from channel to enterprise and efficiencies are exponential.

From these inputs, consultants can help branches understand the specific costs of their own cash management processes, provide them with detailed analysis of customer behavior and make recommendations regarding new processes and technology implementations. In this way, Branch Effectiveness Modelling goes beyond the advantages delivered by software and hardware alone, not least because it helps branches understand the human aspect and readiness to embrace change—a key success factor in any adoption of new technology.





# An integrated solution

## Re-inventing the ATM channel

The integrated solution is designed to give financial institutions much more than would be available from the deployment of a single element. With an integrated solution, financial institutions can ensure that cash is available when and where it is needed without incurring additional costs.

Through the introduction of automation and self-service, the ATM channel is re-invented helping to transform the way people interact with cash, while minimising the risks. It achieves these disruptive transformations by offering a tailored approach that is based on cash demand at a branch level as it changes over time and then optimizing recycler deployment to match.

It also helps to successfully elevate the role of branch staff away from the time-consuming, but error prone cash handling duties, giving them more opportunities to develop productive face-to-face engagements with customers that are focused on more value-added services. In doing so, it helps unveil the unique savings potential of the financial institution from the branch level upwards.

With an integrated cash management solution, financial institutions can:

- Optimize cash replenishment cycles
- Reduce cost and risk of cash in transit (CiT)
- Reduce amount of 'idle' cash held in ATMs
- Increase amount of cash in circulation
- Improve ATM and cash availability
- Reduce risks of human contact with cash
- Improve productivity with efficient branch workflow
- Free staff for more interpersonal, sales-related activity
- Enhance customer satisfaction and loyalty





# Implementing the solution

Faced with the twin challenges of aging technology and a more demanding consumer, deciding where to start when creating an effective cash management operation can be overwhelming. By following three simple steps, financial institutions can minimize the risks associated with any program of change, to develop a more profitable ATM channel.

## Step 1: preparation

- Conducting customer workshops to identify the business case and specific success criteria
- Developing a complete picture of current infrastructure
- Drawing up a business case to ensure that cash recycling is the correct solution in each situation
- Using cash management software to assess historical cash-demand data and understand trend patterns regarding cash requirements





# Implementing the solution

## Step 2: pilot

The second step is to implement a pilot scheme before rolling out the solution on a wider basis. The pilot should:

- Monitor and measure performance of the solution against the established success criteria
- Make sure the solution is performing against agreed Key Performance Indicators, and adjust configuration parameters as necessary
- Ensure the deployed technology is meeting and exceeding value-based expectations
- Validate and refine the solution based on initial assessments

## Step 3: management

From the pilot, financial institutions can gather data to develop a more refined solution that can be rolled out across the branch network. Once deployed, the solution will require on-going management to ensure the expected benefits continue to be delivered. Management of the solution involves:

- Using cash management tools to pull and analyze data regarding cash demand
- Identifying changes to customer behavior and adjusting cash planning to continue cost optimization
- Ensuring performance improvement
- Managing cost





# Conclusion

Today's consumers have more choice than ever before, and are demonstrating greater willingness to exercise that choice. They are certainly looking for a bank they can trust. But they are not prepared to sacrifice convenience, availability and usability. They want a bank that is omnipresent and that understands their financial needs—which still includes ready and instant access to their cash.

For financial institutions that are continually being asked to do more with less, optimizing the ATM network to meet that demand for cash availability has to be accomplished in a smart, efficient way. The integrated cash management solution from NCR, based on the three pillars of hardware, software, and consultancy does just that.

By helping financial institutions and their branches develop a tailored solution that meets the unique requirements of their particular customer base, it ensures a lean, streamlined and responsive cash management operation. The result is a more profitable organization, a more secure operation, and a more satisfied customer.



# Why NCR?

NCR Corporation (NYSE: NCR) is the global leader in consumer transaction technologies, turning everyday interactions with businesses into exceptional experiences. With its software, hardware, and portfolio of services, NCR enables more than 550 million transactions daily across retail, financial, travel, hospitality, telecom and technology, and small business. NCR solutions run the everyday transactions that make your life easier.

NCR is headquartered in Duluth, Georgia with over 30,000 employees and does business in 180 countries. NCR is a trademark of NCR Corporation in the United States and other countries. The company encourages investors to visit its web site which is updated regularly with financial and other important information about NCR.

NCR Corporation | 3097 Satellite Boulevard . Duluth, Georgia 30096 . USA

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