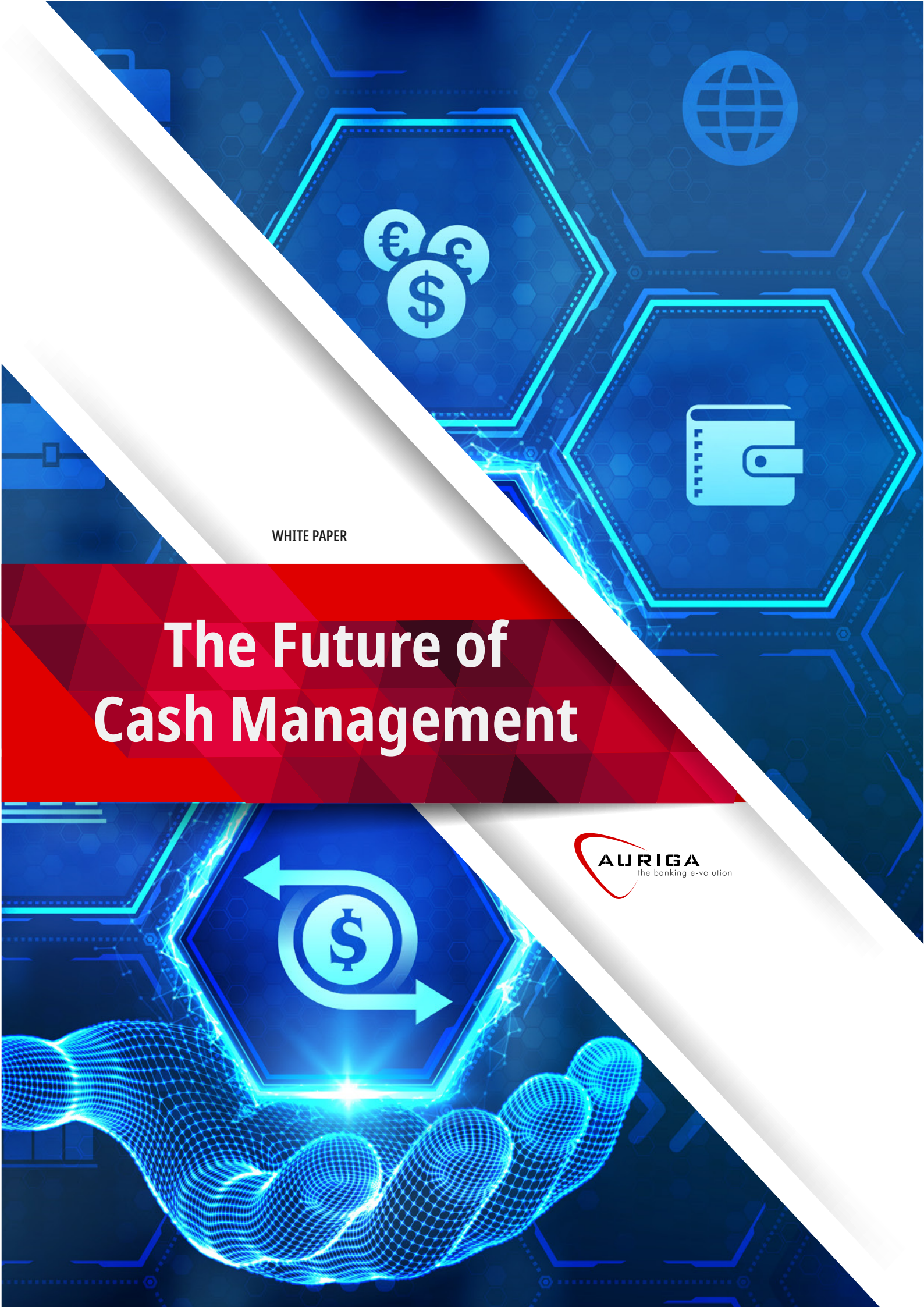

WHITE PAPER

The Future of Cash Management

AURIGA
the banking e-volution

Introduction

Cash management has been a fundamental part of banking since the beginning of time. Managing the inflow and outflow of cash to ensure a bank supplies its branches and ATMs with enough cash, while **minimising the cost of moving cash** around, are the goals of cash management.

However, cash management has evolved significantly in response to changing customer behaviours and business needs, technology, and macro-economic trends.

Further change is forecast for the future as AI and machine learning become even more essential to how a bank manages cash; and new operating models are implemented that promise both operational cost savings and significant service improvements for customers.

In progressing their plans, banks and ATM operators need a holistic, **data-centric approach** to streamline the management of intricate ATM networks and counter the escalating costs associated with cash access. The merits of such an approach, grounded in continuous data collection and analysis across ATM networks, encompass:

- **Strategic Planning**: Leveraging real-time data to craft bespoke strategies for individual branches or regions, assuring optimal cash flow management and averting superfluous cash loading orders.
- **Operational Transparency**: Facilitating stakeholders with instantaneous access to accounting and operational data relating to cash supply chains, thereby enabling timely interventions and adaptations.
- **Enhanced Customer Experience**: Minimising ATM downtime to guarantee uninterrupted cash access to customers, enhancing their banking experience.

This white paper explores what is ahead for cash management in the banking sector.

Cost Challenges Aren't Letting Up

Any cash management strategy must take account of how customer demand for access to cash is changing.

On one hand, there is a decline in the reliance of cash for payments. In most societies, there is a shift towards using digital payments, online banking, and contactless cards. Real time payment systems mean instant funds transfers.

Altogether, this would seem to reduce the need for banks to move physical cash between locations including branches and ATMs.

Yet, banks are required to still process and offer **access to cash** via their branches and ATM networks because cash remains essential to how a substantial number of people use it to pay for goods and services. While cash usage is projected to decline by 6% CAGR through to 2026, cash accounted for over $7.6 trillion in global consumer spending in 2022 (Source: The Global Payments Report, May 2023)

The challenge is that while demand for cash drops, the cost to manage cash is increasing.

• **High inflation** and **interest rates** have increased the cost of to have an impact on operating costs for managing ATMs.

• The **operational costs of ATMs** are rising because of the need to toughen up ATM security to counter fraud and guarantee the safety of ATM transactions for customers. This requires an investment in physical security and cybersecurity, plus insurance to prevent or mitigate cyber-attacks and physical fraud.

• **Regulatory regimes** that affect how cash is managed are getting tougher too. Meeting regulatory requirements, such as anti-money laundering (AML), often requires additional processes and reporting, which can increase compliance costs.

• **Cash-in-Transit (CIT) services** are not getting any cheaper either. These services, which include managing reconciliation and scheduling of cash supplies, are not immune to cost increases due to both inflation and security measures that they must absorb or, more likely, pass on to their customers through increased charges.

Navigating the Changes to ATM networks

Having **a strong cash management strategy** will become more important even if banks and ATM operators operate much reduced ATM networks. The implications for cash management costs vary depending on the specific circumstances, locations, and strategies of the organizations involved.

A reduced number of ATMs to supply should reduce cash management cost. Fewer ATMs mean less frequent replenishment trips, which can lead to cost savings in terms of transportation, security, and labour. A smaller network can allow cash management efforts to be much more concentrated, making it easier to optimize cash levels, reduce excess cash holdings, and improve forecasting accuracy.

However, it is important to note that there are potential **downsides** and cash management **challenges** associated with **reducing ATM networks**, in addition to how loss of self-service banking channels alienates customers.

A smaller network might require a strategic approach to cash management, as the optimization of cash levels becomes increasingly important to **avoid cash-out issues** and ensure **ATM availability**. While there might appear to be **cost savings** from more focused investments in advanced technology and security systems, it may also require higher investments per ATM to maintain modern features and security. Regardless of how there are less ATMs, banks still need to maintain all the **infrastructure** needed to properly manage them, while delivering an access to cash service that is unsatisfactory for many customers as ATM networks are hacked back.

In summary, the impact of reducing ATM networks on cash management costs can be mixed, with potential cost savings in some areas and challenges in others. The decision to reduce ATM networks should be done carefully considering **customer needs**, **competitive positioning**, and the organization's overall **business strategy**. Effective cash management practices, including **optimization** and **forecasting**, become even more crucial when managing a smaller ATM network.

How technology can transform cash management today and tomorrow

Cash management processes have become more automated, reducing the need for manual data entry and reconciliation. Predictive analytics and machine learning are being used to forecast cash demand at ATMs more accurately, at different locations and optimize cash supply chain logistics. This helps optimize cash replenishment schedules, reducing the risk of cash-outs or excess cash holdings. Cash optimization software and services are increasingly used to manage ATM cash levels efficiently. These solutions help reduce the amount of idle cash in ATMs while ensuring they remain adequately funded to meet customer demand.

However, as cost pressures rise, there is much more that technology can do.

AI (Artificial Intelligence) is poised to become increasingly helpful for ATM cash management by enabling even more efficient, accurate and data-driven approaches to managing cash in ATM networks.

There is a variety of ways that AI will enhance ATM cash management in the future.

Better forecasting - AI will become increasingly essential to how cash demand is forecasted. Accessing historical transaction data, real-time monitoring, and external factors (e.g., holidays, special events), AI can predict cash demand at specific ATMs. This enables ATM operators to optimize cash levels and reduce the risk of cash-outs or idle cash.

Cash replenishment transformed - As AI becomes more powerful, more dynamic cash replenishment scheduling becomes possible. AI can dynamically schedule cash replenishment based on demand forecasts, operational efficiency, and cost considerations. This can lead to more efficient use of resources and reduced operational costs.

More forensic insights on operations - With banks needing to maintain optimal access to cash for customers and improve operational profitability, they can use AI to analyse the overall network of ATMs to determine the ideal locations, services, and cash levels for each ATM, optimizing the entire network's cash management strategy.

Unleash adaptive pricing - More operational efficiencies will be possible when AI is harnessed to support adaptive pricing. This determines optimal pricing strategies for ATM services, considering factors like transaction volume, location, and time of day to maximize profitability.

Support Net Zero Goals – by optimising cash management process can help reduce carbon emissions and thus contribute to a bank's ESG reporting and targets.

AI in ATM cash management can significantly improve efficiency, reduce costs, enhance security, and provide better customer experiences. However, it is important to note that implementing AI in cash management requires careful planning, data integration, and ongoing maintenance to ensure its effectiveness and security. Additionally, regulatory compliance and data privacy considerations are essential when deploying AI in financial services.

Current and continuing investments in AI, automation, cash forecasting and predictive analytics will help manage and reduce rising operational costs through for example, less manual processes, mitigating the cost of holding excess cash for liquidity purposes and less idle cash holdings and replenishment operations.

The same technology investments will ensure the customer experience of using self-service channels is always enhanced through ease of access to cash services and at all locations.

New operating models to control cash costs

Improving cash management will depend on more than just smarter technology, however.

There are tremendous opportunities to be gained from re-imagining how self-service access to cash channels are organised and managed to be more cost efficient.

How some country's banks are pooling their ATM networks is another way that cash management costs are being controlled, while enhancing provision of state-of-the-art ATMs and ASSTs. ATM pooling can leverage advanced cash management to maximise the operational efficiencies and improve customer experience. . This is especially true because in this case there are multiple cash-in-transfer (CIT) operators to coordinate – one moving cash form the central vaults to branches and another loading and unloading ATMs

By siting ATMs and ASSTs in locations where customer demand will be greatest, such as major transport interchanges or shopping malls, ATM pooling optimises cash management costs. With multiple banks sharing ATMs, CIT and insurance costs are lower, with less ATMs to protect and replenish. This helps put ATM services on track to break even and be profitable.

Especially when these new operating models are combined with that investment in new cash management technology solutions.

As more markets consider ATM pooling, the concept of ATM as a service will become much more commonplace and deliver sustainable cost savings for cash management through modernised ATMs fleets and networks that are better aligned to changing customer demands.

Choosing Auriga as your future cash management solution partner

Auriga's **WWS Cash Management solution**, which has been operational for Auriga's customers for several years now, is enabling banks and ATM operators to improve customer experience while controlling the costs of access to cash in today's dynamic and challenging markets.

The solution answers current and future challenges on cash management:

- **Predictive Analysis:** By anticipating the cash requirements of different organisational units, Auriga provides counting rooms with accurate demand and cash flow forecasts. Their predictive model accounts for variables such as seasonal peaks, public holidays, and daily usage patterns.

- **Automation & Monitoring:** Many banks still rely on manual processes or basic mathematical functions for cash management. With Auriga's Cash Management software, banks can automate these processes, enable real-time monitoring and a more efficient intervention planning. Including reducing waste related to unnecessary order management costs by 25%. This not only reduces errors but also streamlines operations.

- **Optimised Cash Transit Management:** Through predictive analytics, banks can schedule cash resupplies effectively, minimising the chances of ATMs running out of cash and thus enhancing customer experience.

- **Data-Driven Decision Making:** With access to a comprehensive dashboard, banks can generate up-to-date reports and monitor key metrics such as cash availability, number of banknotes withdrawn, and order lifecycle. This rich data source allows for more informed and strategic decision-making. The orders generated by the AI system guarantee a reduction of the remaining cash stock in the cashpoints by 40%.

- **Increased Service level:** the service level guaranteed by a human operator is guaranteed to the same extent by the software, with an increase of about +5%, despite the growing number of managed cash points. In the projects involving Auriga, the increase in managed cashpoints was 300% in 18 months.

For financial institutions looking to optimise cash management, there is significant reassurance from how Auriga has a track record of delivering quantifiable benefits from applying its AI-powered data analytics to controlling cash management successfully.

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