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Optimizing the retail bank supply chain

How retail banks can lower costs, reduce inventory and boost productivity: Lessons from consumer business

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The cash conundrum

Despite new and integrated methods of payment, cash in circulation globally has increased year after year and plays a major role in advancing economic growth. Beyond their convenience, automated teller machines (ATMs) and other technologies make cash easily available to customers. For retail banks, however, the cost and complexity of operating these technologies continues to rise across the entire cash supply chain–from holding, counting and validating cash to processing, transporting and protecting it. In fact, the worldwide cost of handling cash already exceeds $300 billion per year.

To reduce these costs and improve efficiency, retail banks need new methods. One good way to adopt a fresh perspective is by looking at how leading consumer business (CB) organizations efficiently move goods through their supply chains. By thinking of cash as goods, retail banks can apply proven CB strategies to reduce excess inventory, lower handling and processing costs, improve operating efficiency and optimize their network of ATMs. More critically, banks that manage their cash supply chain more effectively can also improve productivity and better position themselves to compete in the marketplace.

Cost reduction: The next boost in bank productivity

To generate competitive advantage, retail banks across North America are striving to improve productivity. As revenue streams stagnate, however, and growth slows, these initiatives run up against challenges. The reality is that North American retail banks have largely exhausted their local markets, limiting the availability of significant new sources of revenue.

As a result, retail banks must now focus on the other side of the productivity equation: cost. One global Canadian bank appointed a cost reduction team to meet its ambitious goal of reducing expense growth by 50%. Although the bank recognized the difficulty of reducing expenses in absolute terms, it stressed the importance of "slowing expense growth".[1] Other Canadian banks are also making operational changes to reduce costs. In fact, one CEO recently noted that tackling cost was the new reality for banks in today's low interest rate environment.[1]

Analysts suggest that the two biggest ways for retail banks to cut costs is through staff and branch operations.[1] While most large retail banks in North America are currently looking at restructuring and right-sizing their labour force, few have taken a hard look at optimizing branch operations, including the cash supply chain, as a way to reduce costs.

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The growing cost of the cash supply chain

Retail banks operate some of the largest, most complex and most secure supply chains in the world, transporting and storing cash across thousands of locations every day. The cost of operating these supply chains extends to spending on all the equipment and services required to process and distribute cash throughout the bank's network–from the central bank through to branches/ATMs and ultimately to customers. These costs are high and growing due to two main drivers: the rising demand for cash and the increasing use of more complex technology across the supply chain.

Globally, cash in circulation has increased year after year. In Canada, the total value of physical cash in circulation rose to $61 billion in 2011, up from $40 billion in 1999.[2] Similarly, the European Central Bank and United States Federal Reserve Bank both reported a near 9% increase in the level of their currencies in circulation over the past three years.[1] As the demand for cash rises, retail banks are deploying more equipment and contracting for more services to process and distribute cash to customers. For instance, over the last 12 years, the deployment of ATMs rose by 65%[3] to 58,000 machines in Canada[4] and by 23%[5] to 400,000 machines in the US.[6]

Figure 1 – Cash supply chain network

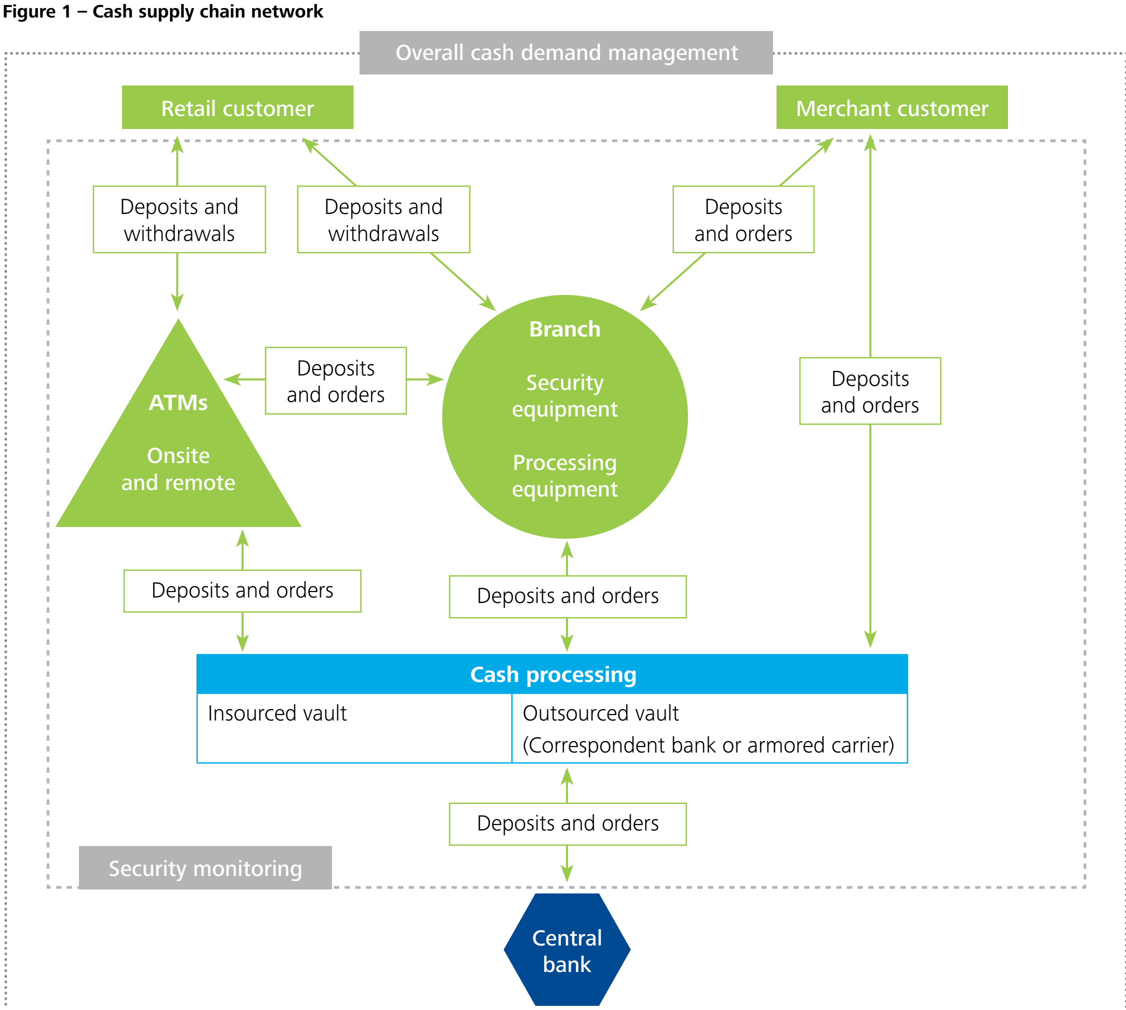
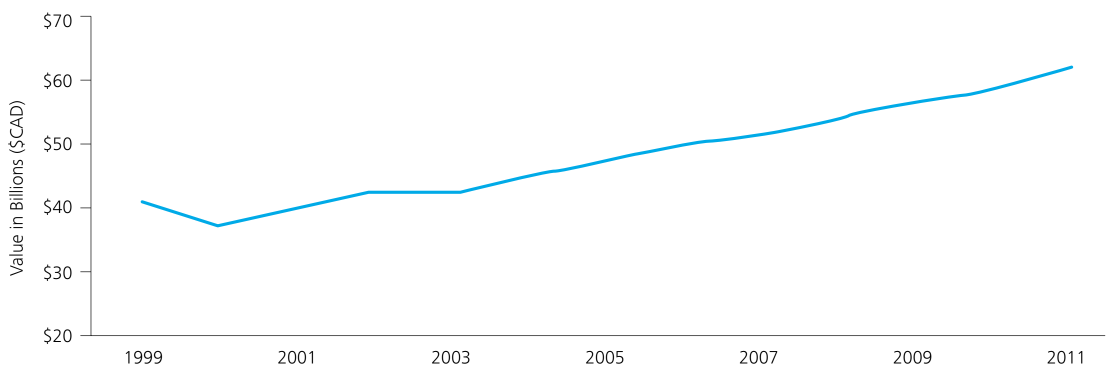


Figure 2 – Value in circulation by Bank of Canada[7]



In addition to the growing use of equipment to manage the cash supply chain, the equipment itself is becoming more complex and sophisticated. ATMs today provide more functionality through more advanced operating systems, enhanced security features and additional account services. Similarly, more advanced hardware features include cash recycling and optical scanning to improve counting accuracy. However, the cost per ATM has steadily risen as a result. Today, the average ATM costs $1,700 per month in Canada.[2]

Despite these trends, many North American retail banks have not effectively addressed the growing costs incurred across their cash supply chains. In general, banks have too much cash in their network and spend too much on their cash processing and distribution equipment and services. For example, retail banks often keep up to 40% more cash in their ATMs than required, when excess cash of 15% to 20% is considered sufficient.[8] By reducing this differential, banks would have access to more excess cash that they could put to more productive use, rather than have it idling inside ATMs. In addition, most retail banks have not maximized their negotiating leverage by consolidating their supply base for ATM equipment, maintenance, armoured courier services, etc. As a result, they are not realizing the full benefit of their strategic sourcing and contract management efforts.

Applying the lessons from CB to retail banking

To gain a fresh perspective on this problem, compare the retail bank cash supply chain with traditional supply chains from the CB industry, which transform raw materials to end products and distribute these products to consumers. By viewing cash as "inventory" moving through the retail bank supply chain, it becomes apparent that retail banks and CB organizations face very similar challenges. As a result, retail banks can apply proven strategies from the CB industry to reduce excess inventory, lower handling and processing costs, improve operating efficiency and optimize their ATM networks.

Leading CB organizations have adopted sophisticated approaches to supply chain management across four major stages of the supply chain:

Plan: Forecast demand and plan inventory and supply to maintain/improve service levels while reducing inventory.

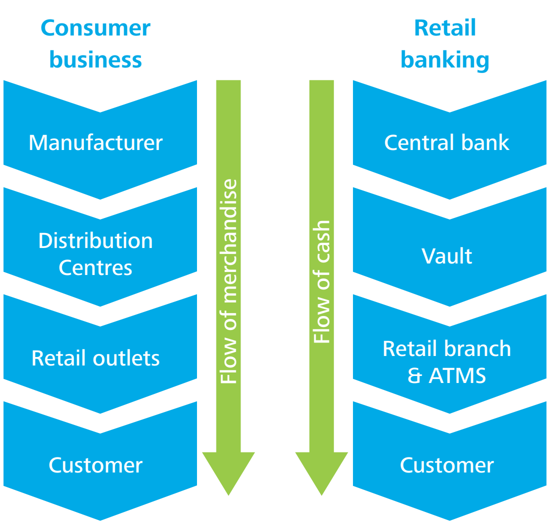
Source: Reduce supplier spend and rationalize the supplier base.

Make: Leverage Lean and Six Sigma approaches to reduce waste and excess in operations.

Deliver: Optimize the delivery and routing network to reduce transportation and logistics costs.

By borrowing these approaches, retail banks can enhance their cash supply chain practices and consequently boost productivity.

Figure 3 – Flow of inventory and cash



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Plan to improve service levels while reducing inventory

The CB industry places significant focus on having the right amount of inventory at the right time. Excess inventory results in added costs: carrying charges, absolution, disposition costs and opportunity costs. Conversely, inventory shortages result in lost revenue. Leading CB organizations have developed sophisticated processes to manage these challenges, including planning inventory and supply to match their forecasted demand. With proper supply chain planning, CB organizations have achieved significant cost savings, most of which can be directly applied to retail banks.

Table 1 – How savings benchmarks in the CB industry apply to retail banking

	CB benchmark	Retail banking applicable
Inventory reduction	5 – 15%	Yes
Reduced transportation and logistics costs	2 – 5%	Yes
Margin from lost sales/investments	20 – 30%	Partially
Obsolete inventory	20 – 30%	No

Leading CB organizations have developed sophisticated processes to manage these challenges, including planning inventory and supply to match their forecasted demand.

For retail banks, a branch or ATM should never run out of cash, as that can severely hamper reputation; conversely, extra funds at an ATM could be invested elsewhere to earn revenue. Statistics show that most ATMs hold 40% more cash than required.[4] Accurately planning cash (and other physical currency) would provide retail banks with the ability to reduce their working capital (cash inventory) and operating expenses (processing and transportation costs) while still maintaining high service levels. Table 2 shows similarities in demand planning across the two industries.

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Table 2 – Planning impact in CB and retail banking

Demand planning concept	CB industry	Retail banking industry
Demand forecasting	Statistical forecasting to develop time phased sales forecasts at stores and distribution centres.	Statistical forecasting to develop time phased cash depletions out of branches and ATMs.
Inventory planning	Multi-echelon inventory planning that leverages target customer service levels to determine inventory required at distribution centres and retail locations.	Multi-echelon inventory planning that leverages target customer service levels to determine cash required at vaults, branches and ATMs.
Inventory replenishment	Economic order quantities to determine replenishment cycle that minimizes transportation and carrying costs, with constraints on case and pallet sizes.	Economic order quantities to determine replenishment cycle that minimizes transportation and carrying costs, with constraints on cylinder sizes.
Supply planning	Constrained supply planning to create distribution plans from plants to distribution centres (DCs) to stores based on forecast and target inventory levels, respecting storage, production and transportation constraints.	Constrained supply planning to create distribution plans from vaults to branches and ATMs based on forecast and target cash levels, respecting storage and transportation constraints.

Source effectively to reduce supplier spend

CB organizations generate value from strategic sourcing by reducing the total cost of ownership (TCO) without sacrificing core requirements for the goods and services they buy. Leading organizations employ a wide range of both supply- and demand-side strategies, and encourage collaboration between supply chain and various stakeholders to execute these strategies.

In the CB supply chain, spend is concentrated on direct materials and the associated goods, equipment and services that help process these materials into finished products and transport the products to customers. Savings are typically generated by consolidating suppliers to build negotiating leverage, standardizing equipment specifications to lower operating costs and streamlining service levels to lower cost while meeting internal requirements.

A direct parallel can be drawn with retail banking in terms of sourcing opportunities in the cash supply chain. In retail banking, a significant portion of spend is concentrated on the equipment and services that help move cash through the supply chain. By applying supply and demand management strategies to this spend, retail banks can generate significant savings that will contribute to bank productivity. Table 3 provides a summary of leading supply- and demand-side strategies.

Retail banks have traditionally focused on sourcing activities within a region or line of business. However, few banks have successfully implemented enterprise-wide supply and demand management strategies. As a result, few banks have realized the full potential cost savings available through strategic sourcing. Leading retail banks have achieved savings of 15% to 20% by sourcing the equipment and services that support the cash supply chain.

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Table 3 – Supply and demand management strategies

Spend category	Supply management strategies	Demand management strategies
Currency processing services	• Outsource all non-critical processing services from branches to external service providers • Maximize use of offshore suppliers	• Evaluate use of ATM deposit imaging: Compare cost increase due to higher specification versus reduced demand for processing services
Currency processing equipment	• Consolidate suppliers through a competitive sourcing process • Explore opportunity to consolidate suppliers across processing equipment and ATM deployment, where possible • Centralize supplier and contract performance management activities across all equipment and services contracts with major suppliers	• Standardize on fewer equipment specifications
ATM deployment	• Consolidate to one enterprise-wide supplier through a competitive sourcing process • Optimize lease-versus-buy decision based on cost of capital, maintenance fees, etc. • Use a multi-year replacement forecast to negotiate pricing, price escalations, etc.	• Standardize on fewer ATM specifications • Reduce proportion of full-service ATMs based on demand profile • Optimize ATM replacement period based on lifecycle cost analysis • Optimize ATM deployment locations based on utilization and market competition analysis
ATM maintenance (1st and 2nd line)	• Consolidate to one enterprise-wide supplier for all first and second line maintenance through a competitive sourcing process	• Standardize response time service levels for both first and second line maintenance across all geographies and lines of business
Armoured courier services	• Consolidate suppliers through a competitive sourcing process • Establish primary supplier in each major geographic region • Standardize contract terms for fuel surcharge and penalties • Explore opportunity to consolidate tier 2 maintenance in master service agreement	• Standardize service levels for deliveries to and from the branch or ATM based on replenishment requirements • Use new technology ATMs that can recycle cash deposited by customers and re-dispense it for withdrawals, leading to fewer deliveries to the ATM

Case study

Outsourcing the supply chain at TD

TD Canada Trust already outsourced its cash management services to G4S with the third-party provider managing 2,577 of its fully functioning ATMs, both cash deposit and dispensing machines.[9]

TD also negotiated an outsourcing deal with HP for $420 million, outsourcing contract upgrade and management of its ATMs and point-of-sale payment systems across Canada. TD said the deal would "produce significant business advantages, such as shift from fixed to variable costs, capital avoidance, operating cost and risk reductions, and increased efficiency and productivity".[10]

Like most financial service organizations, retail banks have begun switching to an outsourced service delivery model where external service providers (on-shore and offshore) manage more and more services. However, it is still common for in-house staff to manage many activities within the cash supply chain, particularly at the branch level. By looking critically at the cash supply chain activities currently provided in-house, determining where viable supply markets exists to provide services externally and competitively sourcing external suppliers for these services, retail banks can achieve even greater cost savings and productivity improvement. Table 4 summarizes these expected benefits.

Table 4 – Potential savings from outsourcing supply chain activities

Cash supply chain activity (All figures in $US)	Large banks off-premise ATMs (Cost/month)	Third-party managed service providers (Cost/month)	Savings/ Month	Savings%
Armoured courier services	$208.00	$172.00	$36.00	17.3%
ATM maintenance	$165.00	$90.00	$75.00	45.5%
Communications	$150.00	$50.00	$100.00	66.7%
Currency management	--	$115.51	($115.51)	n/a
Currency processing	$85.56	$64.17	$21.39	25.0%
Total	$608.56	$491.68	$116.88	19.2%

Make operational changes and aim for leading practices

CB organizations focus on streamlining their operational processes to reduce waste and improve efficiency, thus lowering costs. Lean operations and Six Sigma fundamentals are often leveraged in many manufacturing facilities, and increasingly in many non-manufacturing ones.

Within the retail banking supply chain, the concept of streamlining manufacturing is replaced by streamlining cash processing. With the large quantity of physical cash in the retail bank network, it is imperative to reduce the effort required to process it.

Table 5 – Streamlining supply chain processes in CB and retail banking

Lean operations concept	CB industry	Retail banking industry
Reduce waste	Increase throughput by improving the quality of products or reducing redundancies in the process to produce more products	Improve processes to reduce cycle time from collecting and replenishing cash
Increase capacity	Leverage production equipment with increased capacity	Use ATMs that have extra cylinder capacity or replenish cash using deposits made in the machine
Reduce maintenance costs	Implement predictive and preventative maintenance programs to increase uptime of production equipment	Implement predictive and preventative maintenance programs to increase uptime of ATMs

Within the retail banking supply chain, the concept of streamlining manufacturing is replaced by streamlining cash processing. With the large quantity of physical cash in the retail bank network, it is imperative to reduce the effort required to process it.

Deliver using optimized routes to reduce transportation costs

CB organizations employ sophisticated logistics strategies to deliver products to the right location at the right time using the least amount of resources. Leading organizations achieve significant cost reductions through these strategies. Although retail banks do not share the same concerns as CB organizations over inventory obsolescence or bulk delivery costs, they do share concerns about getting their product (i.e., cash) to customers. In addition, the security and frequency of distribution are concerns shared by organizations in both industries. Overall, the goal in both industries is to optimize the route and reduce transportation and logistics costs in getting products to customers. Table 6 illustrates the similarity in logistics strategy between the two industries.

Analysts predict that the two biggest ways for banks to cut expense growth is to reduce staff counts and reduce branches. With most Canadian banks planning to build new branches or renovate old ones in the next few years,[1] strategic placement of these branches would become instrumental for all banks in 2013.

Table 6 – Logistics strategies in CB and retail banking

Logistics strategy concept	CB industry	Retail banking
Network optimization	Optimize distribution centres and retail locations to reduce cost of delivery from DCs to retail stores	Optimize vault, branch and ATM locations to reduce cost of delivery from vault to branch and ATMs
Outsource logistics planning	Outsource to 3PL (third-party logistics) company to reduce delivery costs	Outsource to cash management companies to reduce delivery and maintenance costs

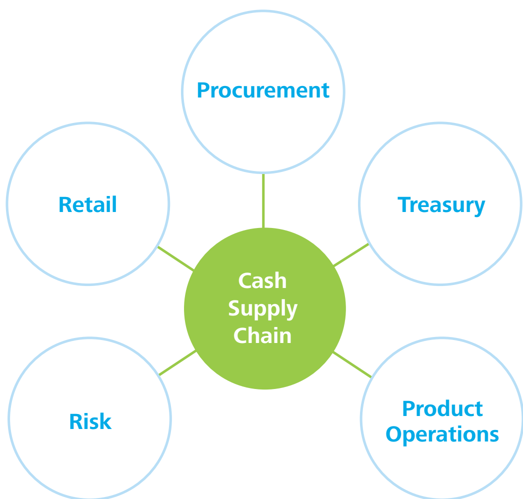
CB organizations employ sophisticated logistics strategies to deliver products to the right location at the right time using the least amount of resources.

Optimizing the supply chain presents challenges… that can be overcome

Adopting CB supply chain strategies can be difficult for retain banks, as they affect diverse groups of stakeholders with very different objectives and incentives. Traditionally, many of these groups work in silos, yet each has a critical role to play in transforming the cash supply chain.

By bringing these groups together and aligning on strategic approaches, retail banks can transform their cash supply chain and significantly improve productivity. The alternative is to continue delivering incremental short-term tactical improvements, which often dissipate with time.

Figure 4 – Stakeholders and core business objectives



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Core business objectives

Risk
- Identify enterprise-wide risks
- Establish risk management capabilities

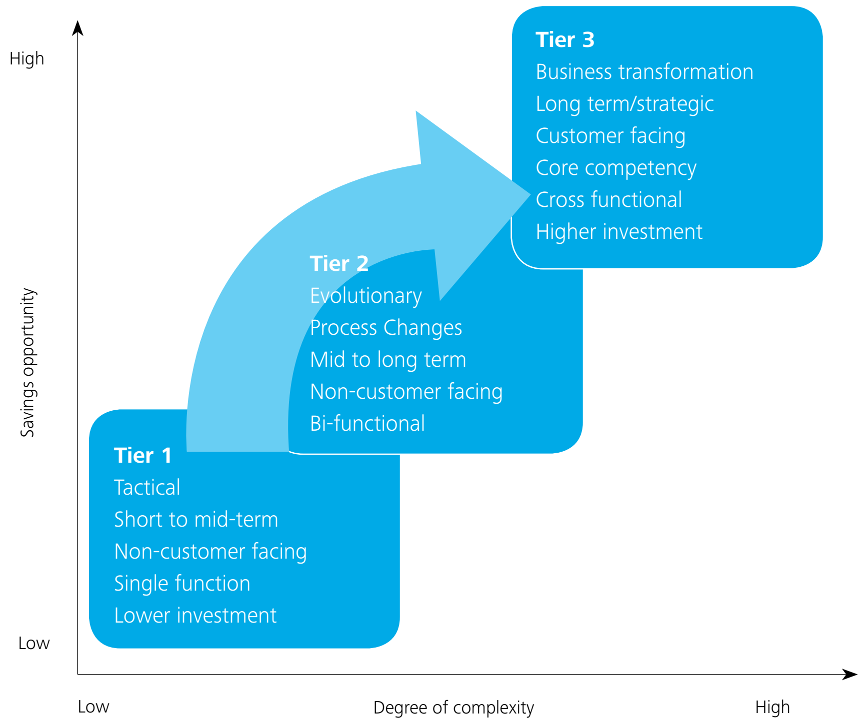
Retail business
- Grow revenue by developing new products and markets
- Improve service to existing customer base

Procurement
- Reduce supplier spend and deliver greater value-for-money

Treasury
- Ensure adequate supply of cash to finance business activity
- Maximize capital efficiency and improve risk-return ratio

Product operations
- Support delivery of services through business processes and systems

Figure 5 – Savings vs. complexity

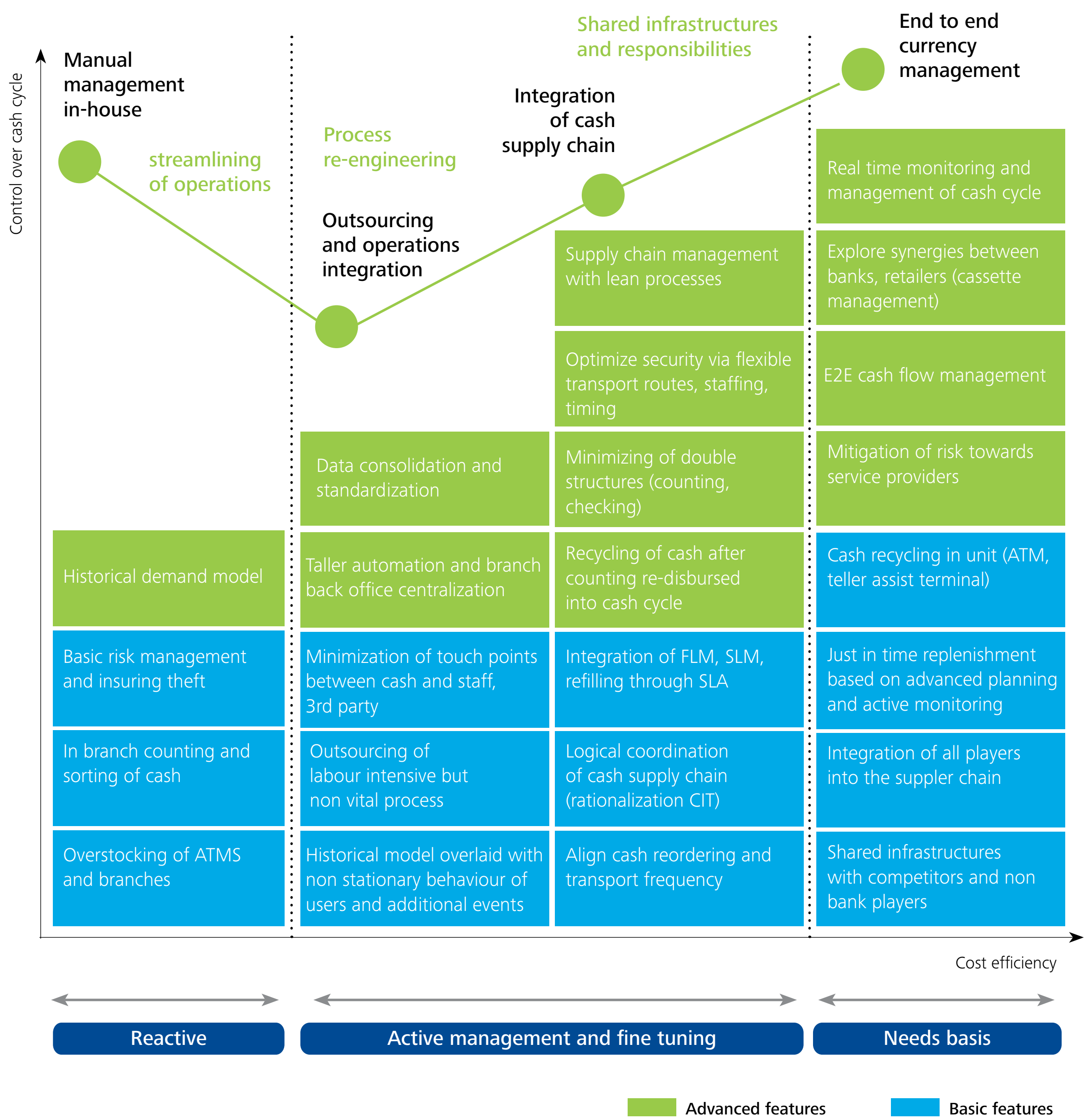


This journey requires a few key steps:

1. Establish a central task force with a clear owner that has support from the CEO and CFO to investigate the opportunity and strategic options around optimizing cash operations. The task force should have representation from all affected stakeholder groups.
2. Develop a baseline understanding of your existing supply chain practices, including the following analyses:
   – Daily withdrawals and cash levels at a sample set of ATMs
   – Summary of spend by supplier, geography and business unit for all suppliers involved in cash operations (ATM deployment, ATM maintenance, currency handling, vault management, armoured courier, etc.), including contract terms
   – Cash handling and vault management processes
   – ATM network map, routing plans and cash replenishment criteria
3. Apply supply chain concepts from CB to identify strategies to optimize the bank’s cash supply chain, and quantify the benefits of:
   – Optimizing inventory levels
   – Competitively sourcing contracts and rationalizing the supply base
   – Streamlining cash handling and vault management processes
   – Optimizing the ATM network and routing processes

These strategies will form the basis of a transformation roadmap that can shift the cash supply chain from “reactive” to “needs-based,” while boosting productivity.

Figure 6 – Key building blocks of an integrated cash supply chain[10]



Next steps

If your bank is looking for a way to navigate these challenges, enhance your cash supply chain capabilities and improve productivity, Deloitte can help. Leveraging extensive experience in the retail banking environment and the CB industry, we help organizations build value by uncovering insights that create opportunities for cost reduction, improving efficiency and mitigating risks. Delivering this kind of value requires a broad range of talent and capabilities, across many functional service lines.

Finance and Performance Management

All organizations face cost challenges: some are predictable and some unanticipated. Ironically, success can exacerbate these problems and growing organizations face a range of potential issues as expanded offerings and successful product lines can create unforeseen expenses. And many companies' cost models don't provide enough insight into which enterprise activities actually drive costs: they're simply not sophisticated enough to account for those variables.

Our approach to cost management identifies hidden business costs and provides an organizational structure to effectively manage and, where possible, reduce costs–all without diminishing value.

Strategic cost management:
The goal of strategic cost management is to build a structured approach to sustaining value over time. This means creating a cost model that clearly identifies your critical cost drivers. Deloitte's highly experienced cost management professionals have refined this process, as well as developed a suite of methodologies, tools and resources, that have been used on numerous global projects across all industries.

Enterprise cost reduction:
Once your cost model is in place and you identify critical cost drivers, you can undertake cost-cutting measures that support your business objectives and preserve existing value. By determining which activities contribute the most to long-term shareholder value, you can identify areas that provide the best opportunities for strategic cost reduction.

This methodology can be applied to virtually every aspect of your organization, including your business configuration, processes, organizational models, approach to governance and tax structure.

Deloitte understands the promise of performance. We work to fulfill it. An efficient, integrated supply chain operation provides a powerful competitive advantage for companies that do it right.

Supply Chain Management

As consumers demand more value, better service and greater convenience, the entire supply chain must react. Our integrated teams specialize in supply chain management, operational improvement and technology–things that will have a rapid impact on your organization's efficiency and productivity. Whether you need to develop a global supply chain strategy, implement a suite of integrated management services or plan and execute a one-time project, we have the solution for your challenge.

Supply chain planning:
A synchronized, demand-driven supply chain provides the right level of customer service while optimizing costs, assets and flexibility.

Sourcing & procurement:
It's impossible to achieve world-class, cost-effective supply chain performance without a strong and reliable global supply base.

Production:
Combine lean manufacturing principles with Six Sigma tools to improve the efficiency and reliability of all core business processes, including the supply chain.

Distribution and logistics:
Distribution and logistics operations that improve product and information flows are critical to customer order fulfilment–and to achieving the "perfect order."

Deloitte understands the promise of performance. We work to fulfill it. An efficient, integrated supply chain operation provides a powerful competitive advantage for companies that do it right. With more than 100 Canadian supply chain specialists–part of a global network of over 2,000–Deloitte delivers cross-industry knowledge and experience across all areas of supply chain management, from strategy through implementation.

Enterprise Risk Management

Enterprise Risk Management Services help organizations integrate risk management into their business and strategic processes to enable them to take risks to create value as well as respond to and mitigate risks appropriately. We provide a range of services to help organizations with their risk management issues, including identification and prioritization of enterprise-wide risks, assessment of an organization's risk capabilities and development of the tools, processes and organizational structures needed to build a robust and sustainable risk management program.

Our team

To learn how you can streamline your cash supply chain, contact our retail bank supply chain team

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Endnotes

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Notes

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