

EXECUTIVE SUMMARY

Maximizing Government Cost Savings

Indicators for calculating savings from
centralizing and digitizing payments



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Maximizing Government Cost Savings

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Results of applying the cost savings methodology in Peru, the Dominican Republic and Costa Rica.

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ONE WAY TO ADDRESS THE IMPACT OF COVID-19: TREASURY SINGLE ACCOUNTS WITH PAYMENT DIGITIZATION

The economic consequences of the COVID-19 pandemic will cause the economy of Latin America and the Caribbean (LAC) to shrink by an estimated 5.3% by the end of 2020, placing at least 30 million people below the poverty line.¹ At the same time, the region's exports are projected to fall by 15% in value and 6% in volume, and remittance inflows are also expected to decline by between 10% and 15%.

Furthermore, measures taken by governments in the region to mitigate the impact of the pandemic will result in a significant increase in fiscal deficits and debt levels.

To provide an effective response to the pandemic and foster an appropriate environment for economic recovery, LAC governments need to reach a holistic, up-to-date understanding of the resources available to them. Adopting a treasury single account (TSA) and digitizing revenue collection may help achieve these objectives.

This study shows that improving treasury management in LAC by implementing TSAs and digitizing revenue collection and payments could generate potential annual savings of US\$1.1 billion (approximately 0.15% of total tax revenues) for FOTEGAL (Latin American Government Treasury Forum) member countries.² This estimation includes 14 LAC countries that were not included in the original study and proposes a simplified version of the methodology used (see Annex I). The result is a conservative estimate of the potential savings that could be generated by implementing TSA efficiencies in LAC.



EXECUTIVE SUMMARY

The treasury single account (TSA) has been widely adopted by central governments in Latin America and the Caribbean (LAC). For the purposes of this study, the TSA is defined as a unified structure within government bank accounts that allows treasuries to consolidate and make better use of government cash resources (Pattanayak and Fainboim, 2011).

The spread of the TSA is testimony to the fact that cash and treasury management experts are acknowledging how essential they are as a tool for managing public funds more efficiently, increasing transparency and modernizing public administration.

Adopting TSAs and digitizing revenue collection and payments has enabled many LAC governments to standardize and simplify their operations, make faster financial transactions, access data on cash flows and balances quicker, optimize their budget execution and significantly reduce treasury management costs.

All the same, the experience of many governments reveals that they need to continue expanding the digital financial ecosystem if they wish to obtain these outcomes. Maximizing the financial benefits of the TSA and digital government payments will depend on several factors, many of which are partially or wholly outside the control of treasuries. These include the regulatory environment, the level of development and maturity of financial management systems, and the availability and quality of telecommunications systems and those of banking and other financial services, especially payment systems. As TSAs garner increasing interest among economic experts and policymakers, these factors have become a major topic of discussion and analysis.

Several studies in LAC have identified how digitizing payments and centralizing government funds through TSAs can increase efficiencies and savings opportunities. One example of these is the Better Than Cash Alliance publication “Sustained Effort, Saving Billions: Lessons from the Mexican Government’s Shift to Electronic Payments” (Babatz, 2013). The study found that digitizing and centralizing payments enabled the Mexican federal government to generate annual savings of US\$1.27 billion. A similar study estimates that the potential transaction cost savings generated by migrating cash to digital payments in other countries³ would be equivalent to around 1% of GDP for developing countries, or US\$220–320 billion (Lund, White & Lamb, 2017). A third study identified potential savings from implementing the TSA in the Dominican Republic (Manoel & Pérez, 2017). The study estimated that the gross opportunity costs of idle balances outside the TSA exceeded US\$45 million in 2016.

At the 9th Annual Latin American Seminar on Public Treasury Management (FOTEGAL), which was held in 2018, LAC treasuries put forward an initiative to promote studies on the efficiency of TSAs and digital payment systems. This study seeks to build on existing research and contribute to the creation of a new methodology (Annex I), including indicators to help government treasuries analyze the efficiency gains and potential savings that could be made by implementing TSAs and digitizing payments. The study presents 18 measurement indicators in two categories: cash management efficiency and operational efficiency (Annex II). It also identifies good practices in connection with the implementation of TSAs and digital payments.

To evaluate existing efficiency gaps and potential gains, the study defines specific benchmarks for good practices for each of the countries it includes: Peru, the Dominican Republic and Costa Rica. These benchmarks consider the best possible alternative solutions or practices available to local authorities. This implies evaluating the most efficient viable digital payment solution available on the market, for example, or the highest yield that TSA funds could aspire to, taking current financial market conditions into account. Based on this assessment, the study examines the current situation in each of these three countries, the key challenges they are facing and the progress they have made on centralizing balances in a TSA system and digitizing government payments.

The methodology is highly flexible, uses benchmarks that are specific to the context in each country and points to constraints that may lie beyond the control of national treasuries, such as institutional and legal frameworks or different levels of financial and digital ecosystem maturity.

Digitizing and centralizing payments enabled Mexico’s federal government to generate ANNUAL SAVINGS OF US\$ 1.27 billion

MIGRATING FROM CASH TO DIGITAL PAYMENTS could save developing countries 1% of GDP, or US\$ 220–320 billion

The road to greater financial efficiency and cost savings

Broadly speaking, this study finds that introducing modern technologies to digitize payments and centralize funds in a TSA system leads to greater financial efficiency.

Governments save money in two main ways:

1) by minimizing opportunity costs

(that is, by maximizing interest on available funds) and

2) by reducing operational costs.

The practices that generate the greatest financial efficiency are also those that adapt the most modern technologies for cash management and receipt and payment processing. In general, the benchmarks that enable the lowest transaction and opportunity costs to be obtained are associated with the introduction of modern technological tools.

The three countries analyzed in this study have made significant progress on adopting good practices for centralizing funds in their TSAs and digitizing payments. For example, TSAs were adopted by the central bank or a state-owned commercial bank in all three countries, and the funds in question were relatively fungible. Significant progress has also been made on reducing the volume of funds in other bank accounts and decreasing the use of checks as a means of payment.

By centralizing funds in a TSA, all three countries have also adopted a single treasury unit model. Furthermore, all three have made significant efforts to expand the coverage of their TSAs and have made great progress on this, although they are yet to achieve comprehensive TSA coverage. In Costa Rica, this coverage includes trust funds, which sets it apart from the other countries included in the study. Trust funds are government accounts that are controlled by an authority other than the treasury. These resources are mostly not fungible for treasury operations, but some improvements have been achieved by implementing transparent accounting systems to track inflows and outflows between TSAs and these authorities. In all three countries, the treasury now oversees the opening of bank accounts, which is essential to preventing the proliferation of new accounts outside the TSA.

Potential savings from adopting TSAs

The study identifies potential savings that may help guide improvements to treasury management (see Table 1).

In Peru, annual savings of US\$103.2 million were recorded in 2018. This was equivalent to 37% of the budget of Juntos, the national conditional cash transfer (CCT) program, which benefits more than 650,000 of the lowest-income families in the country. In the Dominican Republic, the estimated potential savings were US\$55.5 million, or 1.5 times what the country currently spends on its CCT program (Progresando con Solidaridad), which seeks to assist low-income households and currently reaches more than 800,000 families.⁴ Costa Rica could save up to US\$29 million, which represents one-third of the cash transfers made by Avancemos, the country's education-focused CCT program.⁵ These figures only take into account operations in 2018, when the scale of the three economies are taken into consideration, these savings are significant, accounting for between 0.3% and 0.4% of annual government revenue.

TABLE 1
Potential savings from adopting TSAs (in US\$ millions) in 2018

INDICATOR	PERU	DOMINICAN REPUBLIC	COSTA RICA
Opportunity cost of non-TSA funds	6.7	22.9	0.9
Opportunity cost of temporary surplus investments from the TSA	0.0	27.1	15.3
Opportunity cost of yields on cash advances and trust funds	0.0	2.7	0.0
Opportunity cost of processing times (floats) for electronic receipts and payments processes	0.7	0.8	0.4
Opportunity cost of yields on available TSA funds	0.5	0.0	0.0
Cost of receipt and payment processing	95.3	2.0	12.3
TOTAL	103.2	55.5	29.0

In the three countries analyzed, payment digitization has the potential to generate savings by reducing receipt and payment processing times and lowering operational costs (see Table 2).

The potential savings from payment digitization are most significant in Peru, due to the payments currently being made to the Banco de la Nación for banking services, which include revenue collection, payment disbursement, and other services. In the Dominican Republic, potential savings are lower because good practices have already been adopted for most receipt and payment processes. In Costa Rica, the potential savings are especially relevant for payment processes.

TABLE 2
Potential savings from payment digitization (in US\$ millions) in 2018

INDICATOR	PERU	DOMINICAN REPUBLIC	COSTA RICA
Opportunity cost of processing times (floats) for electronic receipts and payments processes	0.7	0.8	0.4
Cost of receipt processing	16.5	1.2	12.3
Cost of payment processing	78.8	0.8	0.0
TOTAL	96.0	2.8	12.8

Current adoption levels for digital receipt and payment processes

The study reveals that significant progress has been made on adopting digital payment and revenue collection processes, such that treasuries now make electronic transfers through national payment systems, much of this involving real-time settlements.

All three countries' treasuries used e-banking tools and debit or credit card payments to manage trust funds and petty cash and pay social program beneficiaries. This has led to a gradual reduction in the use of checks and cash as means of payment, which is contributing to reducing the opportunity costs of idle funds in TSA accounts.

For example, in Costa Rica, government petty cash and fuel expenses are paid for using debit or credit cards. The card provider's services were procured through a competitive bidding process, resulting in payment services at no cost to the government. The provider receives commercial fees and other forms of income.

In the case of social programs, the Dominican Republic has moved its CCT program to prepaid cards known as Tarjetas Solidaridad. This payment system has been complemented by excellent telecommunications coverage throughout the country and large numbers of small businesses accepting these cards, which allows beneficiaries to make digital transactions and purchases even if they do not have access to banking services.

Despite this progress, there are still opportunities for further reducing transactional costs and the use of checks. This is discussed in the next section.



Receipt and payment efficiency

The study finds that adopting state-of-the-art payment management and processing technologies generates maximum operational efficiency.

Regarding the operational efficiency of payment to governments, the study finds that government authorities are still processing receipts using nonelectronic means, including payment windows or booths and government bank accounts. These funds are subsequently transferred to the TSA. The study also reveals that standardizing non-tax revenue collection remains a challenge.

Unlike tax revenues, payments for government services and other non-tax revenues often flow through different payment methods. National treasuries do not yet have a complete view of these flows. These findings underscore the importance of treasuries investing in mechanisms to standardize and regulate non-tax revenue collection to continue improving the efficiency of treasury operations. It is also important to note that efficient payment systems drastically reduce the operational cost of transactions and eliminate resource float and thus the cost of idle funds.

The Dominican Republic has already begun to implement improvements by adopting a technological tool developed by the National Treasury to optimize how it collects, centralizes and records public revenue. This will minimize tax and non-tax revenue processing costs and eliminate float days from the banking system, among other benefits. In Peru, the National Customs and Tax Authority (SUNAT) has implemented good practices by adopting e-banking processes to digitize and automate revenue collection, thus reducing costs and simplifying procedures for taxpayers.

With regard to the operational efficiency of payments, improving payment mechanisms through digitization could potentially bring savings in all three countries. In Peru, eliminating check payments and replacing other less-efficient means of payment remains a major challenge. This is largely because the payment system entails significant disincentives (such as high transaction costs and a perceived lack of security) and is further hampered by poor telecommunications coverage in many areas of the country. As a consequence, a large share of payments to social program beneficiaries in Peru are still made in cash. This implies that there is significant potential for savings and efficiencies to be generated through digitization. These can be achieved if current challenges are addressed appropriately.

Reducing operating costs

Improvements to the design of the TSA will increase operational efficiency significantly and reduce operating costs. These improvements include simplifying and standardizing procedures and adopting state-of-the-art technology. This study shows that there are opportunities for improvements to the design of the TSA models in all three countries in question, which would increase the efficiency of these models and reduce operational and opportunity costs.

Operational and opportunity costs are mainly incurred due to float days, the lack of profitability of TSA funds, and the fact that collection and payment methods have not been standardized or simplified. Likewise, tax collection costs could be reduced by moving from in-person processes such as bank teller windows to fully digitized systems.

The study suggests that operational cost savings can be achieved in all three countries, mainly in the form of receipt and payment processing. The country that could potentially save most on these costs is Peru (US\$96 million), followed by Costa Rica (US\$12.8 million in revenue processing) and the Dominican Republic (US\$2.8 million).

The study also reveals that achieving maximum TSA coverage remains a challenge, due to an existing legal framework that guarantees autonomy to certain government authorities. These continue to operate bank accounts outside the TSA, which makes the treasury responsible for all the costs associated with these accounts.⁶ These accounts are generally used for revenue processing (especially in the case of non-tax revenues) or payments.

POTENTIAL SAVINGS from processing receipts and payments

Peru US\$ 96 million	Costa Rica US\$ 12.8 million	Dominican Republic US\$ 2.8 million
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FINAL REMARKS

There is no doubt that all government treasuries can obtain significant financial benefits by investing in TSA efficiency improvements and/or promoting the transition from cash to more efficient digital payment methods.

This study suggests that there is great potential for treasuries in the region to move toward more efficient payment and revenue digitization models, especially in operational receipt and payment processes and more active cash management strategies.

At the methodological level, one of the main contributions of this study is that it identifies a broader set of efficiency indicators for TSA and digital payment processes while also quantifying potential savings. The authors hope that these estimations and the benefits they entail will prompt a shift toward better practices.

The set of indicators that have been identified and the benchmarks that have been carefully selected are powerful decision-making tools for government authorities. These can be implemented periodically to identify new potential savings as circumstances change.

The methodology draws attention to existing good practices in the countries' respective financial ecosystems, thus allowing benchmarks to be identified for implementing possible improvements. In countries that do not yet have a TSA, the methodology also allows inefficiencies in existing financial practices to be measured.

The information that can be obtained from this methodology is vital when it comes to analyzing the status quo and making decisions to bring about necessary improvements. This methodology helps policymakers establish priorities effectively and identify the potential benefits of implementing these changes.

Treasuries in LAC should continue efforts to adopt innovative technologies for public finance management. These clearly have a positive impact on the management of government finances, generating agility, efficiency, greater transparency, cost savings, increased competitiveness, and more inclusive economic growth. This, in turn, leads to greater availability of financial resources to support more cohesive societies and more robust local economies, with more opportunities for governments to invest in productivity and reforms that impact growth.

Annex I. Methodology

For a more detailed explanation of the methodology, please refer to the full report.

This study presents a relatively flexible tool for measuring and calculating efficiency and savings indicators. It can be replicated and adapted to each country's circumstances, including each treasury's existing practices. The methodology assumes that good cash and operational management practices provide the lowest operating and financing costs for each treasury and the greatest profitability for surpluses.

To assess the efficiency of TSA and government payments, 18 indicators were established based on two broad criteria: efficiency and good TSA practices that are identified for the purposes of this study. A review of existing analyses and comments on TSA implementation helps to find these key indicators, which measure cash management and operational efficiency (see Annex II).⁷

It should be noted that the practices in question do not function in isolation. They are interdependent and mutually reinforcing. They were chosen with a special emphasis on the experience of LAC countries. Each good practice was assigned a specific calculation objective: to eliminate the idle costs of funds; increase profitability; reduce the cost of processing receipts and payments; reduce financing costs; and ensure the effective receipt of funds. One or more indicators were proposed for each objective and the respective study variables were identified (see Annex II).

The indicators were also disaggregated into opportunity costs and operational costs. The operational costs include processing costs, overdraft costs, and the cost of increasing profitability.

The potential savings generated by adopting these good practices were calculated for each of the 18 indicators in question. If the calculation of the potential savings yields a result of zero, it means that the treasury has already adopted the good practice in question. In other words, in the specific environment in which the treasury is operating, there is no available practice option that would provide a lower cost.

It is important to note that the application and development of these tools took into consideration the fact that it is not always possible to obtain the lowest costs. The costs of services vary over time and depend on many factors, such as the number of providers in the market, the availability of supplies, and the technological capacity to produce these. There may be regions in the world where some services are unavailable or where the implementation of improvements may require technological, legal, or institutional changes that cannot be achieved in the short term.

The survey on which the proposed methodology was based was conducted between July 15 and 26, 2019, and concerns treasury operations for 2018. The survey was complemented by semistructured interviews with authorities and technicians from the treasuries of each of the three countries. Sessions were also held with officials from the three countries' central banks, TSA cashier banks, the main tax and non-tax collection agencies, and a selection of government authorities responsible for social benefit payments to individuals.

Annex II. Cash management and operational efficiency indicators

CASH MANAGEMENT EFFICIENCY

AREA	OBJECTIVES	INDICATOR	VARIABLES
Concentration of coverage	Eliminating idle cash costs	1. Opportunity cost of non-TSA funds	Amount outside the TSA
		2. Opportunity cost of temporary surplus investments from the TSA	Amount of temporary cash surpluses invested in the TSA
		3. Opportunity cost of liquidity cushion investments	Amount of each liquidity cushion by type of liquidity reserve
		4. Opportunity cost of yields on cash advances and trust funds	Average amount of cash advances and trust funds
Fungibility	Eliminating idle cash costs	5. Opportunity cost of short-term financing	Amount of nonfungible local and foreign currency TSA components
Timeliness of collections and payments	Eliminating idle cash costs	6. Opportunity cost of processing times (floats) for electronic receipts and payments processes	Amount of receipts and payments by number of processing days
		7. Opportunity cost of processing times (floats) for payments via nonelectronic means	Amount of payments by nonelectronic means
		8. Opportunity cost of errors in payments via nonelectronic means	Amounts of payments that are incorrect or have not been processed; error correction times
Concentration	Expanding profitability	9. Opportunity cost of yields on available TSA funds	Total amount in TSA
		10. Opportunity cost of TSA profitability based on risk, return and liquidity ratios	Total amounts in TSA and other accounts

OPERATIONAL EFFICIENCY

AREA	OBJECTIVE	INDICATOR	VARIABLES
Optimizing transaction costs	Reducing the costs of incoming and outgoing transactions	11. Cost of receipt processing	Aggregate amount of received revenues; value of bank fees for each transaction; number and average monthly value of transactions
		12. Cost of payment processing	Aggregate amount of payments made, by means of payment (checks, electronic transfers and others); value of bank fees for each transaction; and number and value of transactions
		13. Cost of reciprocity	Aggregate amount of receipts and payments; transaction processing times in number of days
		14. Collection and payment account maintenance costs	Fees and other treasury expenses for opening, maintaining, recording and reconciling collection and payment accounts
Location	Reducing the costs of incoming and outgoing transactions	15. Cost of fees and commissions relative to the advantages of a commercial bank or the central bank acting as the TSA custodian bank	Fees per transaction and transaction numbers and fees at commercial banks and the central bank
Timely information	Reducing financing costs	16. Treasury account overdraft costs	Amount of overdrafts, short-term financing costs, and other overdraft costs
Timeliness of collections and payments	Guaranteeing effective receipt of funds	17. Lost returns on amounts not received due to short comes in nontax receivable account monitoring	Payments actually received and accrued income
Timely information	Expanding profitability	18. Opportunity cost of investment availability due to forecasting errors	Amount not invested due to forecasting error, lack information on revenues, and time of classification and record-keeping

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