



# Investing in Collections Software to Allow for Monthly Property Tax Payments

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## **Abstract**

Local governments across the United States rely on property taxes for a significant share of revenue. Administration of the property tax typically includes annual or semi-annual collection. This report surveys and interviews both software vendors and local governments to understand the costs, challenges, and benefits of switching to tax collection with monthly installment payments.

Software vendors, including Harris Govern, Thomson Reuters, Tyler Technologies, and GovTech Services have tax collection software systems that are capable of monthly property tax installments. Using this software, both large and small governments in the United States have offered property owners the option of making monthly tax payments.

GFOA examined the costs and effort of switching to monthly billing and collection. The costs vary greatly, depending on each government's current situation. For governments currently using software products that have the capability to offer monthly property tax billing and collection, a switch would have minimal costs. Switching would involve software configurations that would require some consulting/training assistance and minor upgrades but no major software upgrades, implementations, or development work. (Note: GFOA did not evaluate additional costs for the ongoing administration of the monthly billing and collection. For example, going from semi-annual billing to monthly would result in sending six times more bills and processing six times more payments). However, governments that are currently using custom, home-grown tax collection systems will likely find that software was built with limited configuration options (or none). Any significant changes would require additional programming and/or development work, leading to significant costs and effort. In many cases, governments that built software many years ago are focused on maintaining it and may lack staff with the capacity or skills to undertake significant improvements.

## **About the Author**

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### **Research and Consulting Center, Government Finance Officers Association (GFOA)**

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# **Investing in Collections Software to Allow for Monthly Property Tax Payments**

## **The State of Property Taxes**

### **Property Tax Characteristics and Behavioral Incentives**

While many local governments use the property tax as a primary source to fund public services, two features of that tax bother taxpayers: visibility and lump sum payments. Property taxes are highly visible and require taxpayers to actually make a direct payment—as opposed to sales taxes, which are added onto other transactions, or income taxes, which are deducted from income. Additionally, since payment is often required in an annual or biannual lump sum, the amount is large. These features provide residents with few behavioral incentives to pay their taxes promptly.<sup>1</sup>

An emerging area of research has studied the behavioral incentives that arise from making changes to property tax collection methods. For example, econometric research has shown that switching property tax payments from a traditional annual or biannual collection to installments three times a year decreased the delinquency rate in Wisconsin local governments.<sup>2</sup>

Implicit in the aforementioned research reports is that institutional norms in property tax collection may actually lead to unintended consequences for both taxpayers and government. The traditional lump sum payment of property taxes may not align with the budgeting behavior of taxpayers, who likely receive paychecks on a biweekly or monthly basis, and budget for expenses such as mortgage payment, car payment, utility bills, and other recurring charges on a monthly basis, rather than annually or biannually as is the case for property tax bills.<sup>3</sup>

Governments also face a similar concern, by budgeting based upon anticipated sums that show up only once or twice a year, while expenses accrue consistently throughout the year. Therefore, governments with an annual or biannual property tax collection are at an increased risk of potential cash flow issues or shortages in the event that actual property tax revenues are lower than forecasted revenues. This risk can be compounded in the event of a systemic economic event, such as the collapse of the housing market after the recession of 2008-2009.<sup>4</sup>

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<sup>1</sup> See Roy Kelly. 2013. “Property Tax Collection and Enforcement.” In *A Primer on Property Tax: Administration and Policy*, edited by W. McCluskey, G. Cornia, and L. Walters (pp. 141-171). Oxford, UK: Blackwell Publishing Ltd.

<sup>2</sup> Paul Waldhart and Andrew Reschovsky. 2012. “Property Tax Delinquency and the Number of Payment Installments.” *Public Finance and Management*, 12(4), 316-330.

<sup>3</sup> Research has generally shown that American households do not have a high level of financial literacy, and have limited resources or ability to save for the long-term. Therefore, shorter-term property tax payments on a quarterly or monthly basis may better align with their short-term personal budgeting behavior. See Annamaria Lusardi. 2008. “Household Savings Behavior: The Role of Financial Literacy, Information, and Financial Education Programs.” National Bureau of Economic Research Working Paper No. 13824.

<sup>4</sup> Howard Chernick, Adam Langley, and Andrew Reschovsky. “The Impact of the Great Recession and the Housing Crisis on the Financing of America’s Largest Cities. *Regional Science and Urban Economics*, 41(4), 372-381.

## Property Tax Installment Plans and Case Studies

Across the United States, property tax collection is primarily at the county level, although there are differences depending on state rules (see Appendix). In an attempt to reduce delinquency rates or simply as a service to help taxpayers, local governments in a variety of states have adopted higher frequency property tax payments. For example, instead of collecting property taxes only once or twice a year in a lump sum, some governments have implemented programs that allow for quarterly or monthly installment payments.

Collecting property taxes on a quarterly or monthly installment basis is typically advertised to taxpayers as an installment plan. For example, the cities of Toronto and Calgary in Canada have a voluntary installment plan allowing for property owners to pay on a two, six, or eleven-month pre-authorized payment plan.<sup>5</sup>

Research reveals that both cities and counties across the United States offer installment plans, but it does not appear to be a widespread practice.

There are three key characteristics that vary across cities and counties that offer monthly property tax installment plans to taxpayers: eligibility, installment frequency, and autonomy. In regard to eligibility, some local governments restrict participation in a monthly payment plan based on taxpayer characteristics, such as lower income or senior citizens.

Additionally, the installment frequency often includes a range of options, such as traditional annual and biannual lump sum payments and quarterly or monthly payments. Further, governments often appear to have some degree of autonomy in how they levy property taxes, and offer monthly property tax installments to help taxpayers rather than adhere to institutional norms regarding annual or biannual tax collection.

For example, Philadelphia, Pennsylvania implemented an electronic property tax collection system which allows for monthly installments, and targeted low-income individuals and senior citizens.<sup>6</sup> Additionally, Bexar County, Texas allows for ten payments for residents aged 65 or older, individuals with a disability exemption, and veterans with a disability. Similar to Philadelphia, the higher frequency of property tax payments on an installment plan is only open to taxpayers with qualifying characteristics. There are also local governments that offer a monthly installment plan without any restrictions based on taxpayer attributes. Franklin County, Ohio instituted their “Budget Payment Plan” (BPP) in an attempt to provide property tax payers with a monthly installment plan option.<sup>7</sup>

The Franklin County BPP operates through an escrow account. Specifically, a taxpayer can provide a checking or savings account from which monthly property tax payments are deducted.

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<sup>5</sup> City of Toronto. 2017. “Pre-Authorized Property Tax Payment Program.” Retrieved from

<http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=1a15ff0e43db1410VgnVCM10000071d60f89RCRD>

<sup>6</sup> For information on the installment plan application, see <https://beta.phila.gov/services/payments-assistance-taxes/payment-plans/real-estate-tax-installment-plan/>

<sup>7</sup> Franklin County Treasurer. 2017. “Budget Payment Program.” Retrieved from <https://treasurer.franklincountyohio.gov/payments/budget-pay>

The funds are held in an escrow account by Franklin County. The program begins one month after a formal application is submitted by the taxpayer. Any property owner can enroll, except those who have delinquent taxes.

Some cities also allow for different installment frequencies. The City of Shreveport, Louisiana, allows for quarterly or monthly property tax prepayment installment plans, which can provide additional flexibility in the event a taxpayer prefers to pay on a quarterly basis.<sup>8</sup> A prospective taxpayer must fill out an application, and attach a voided check with the bank account from which they want their tax payments to be withdrawn on a quarterly (four payments) or monthly (ten payments from January to October) basis.

## **Property Tax Collection Software**

### **Government Tax Collection Software Survey**

A review of property tax collection software product documentation indicates that multiple vendors specifically mention that they allow user-defined installment plans. These vendors include ACS Tax Systems<sup>9</sup>, Harris Govern, Thomson Reuters, and Tyler Technologies.

To examine the vendor market share and software products, GFOA administered a survey to local governments and technology vendors. GFOA's survey included 398 governments across the United States, with population counts ranging from 25,000 to over 10 million. Small counties are considered to have population less than 100,000; medium sized counties up to 500,000; and large counties with population over 500,000. We used random sampling methods and note that fewer counties were in the large category given that less than 200 counties have populations over 500,000 in the United States according to the Census Bureau. For mid-size and large counties, almost half in each category use custom homegrown solutions rather than working with a vendor. There is a sizeable portion of mid-size and large counties, however, which use Thompson Reuters and Tyler Technologies.

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<sup>8</sup> City of Shreveport. 2017. "Property Tax Information." Retrieved from <https://www.shreveportla.gov/index.aspx?NID=288>

<sup>9</sup> See Xerox announcement for further information regarding the acquisition. Retrieved from <https://www.xerox.com/news/news-archive/2009/swe-acquire-affiliated-computer-services/syse.html>

**Table 1**

Vendors	County		
	Small	Mid-	Larg
ACS Tax System	6%	0%	0%
BS&A	6%	0%	0%
Computer Information Concepts CIC	6%	0%	0%
Devnet	6%	0%	0%
Harris	6%	0%	0%
Helion (Oregon Specific)	6%	0%	0%
Homegrown Solution	13%	45%	43%
Net Data	13%	0%	0%
Quality Data System	0%	9%	0%
Sungard/ Naviline	0%	0%	0%
Thompson Reuters	13%	27%	0%
Tyler/ Eagle	6%	18%	0%
Tyler/ iasWorld	6%	0%	0%
Tyler/ Munis	0%	0%	43%
Tyler/ Orion	0%	0%	14%
Xerox	13%	0%	0%

### Homegrown Software and Software Vendor Adoption

The survey of 398 governments also included questions on when they implemented the system that is currently being used. As shown in table 2, use of homegrown systems were more popular prior to the year 2000 and more recently, governments are turning to purchased systems available in the market. This is significant as those governments utilizing a homegrown system are likely using one that was created 15 to 20-plus years ago and is likely to be based on older or outdated technologies.

**Table 2**

	Before 1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2016
ACS Tax System	0%	0%	17%	0%	0%	0%
BS&A	7%	0%	0%	20%	13%	0%
Computer Information Concepts CIC	0%	0%	0%	0%	13%	0%
Devnet	0%	0%	0%	20%	0%	0%
Harris	0%	0%	0%	0%	13%	20%
Helion (Oregon Specific)	0%	0%	0%	20%	0%	0%
Homegrown Solution	50%	50%	33%	20%	0%	20%
Net Data	14%	0%	0%	0%	0%	0%
Quality Data System	0%	0%	0%	0%	0%	20%
Sungard	0%	0%	17%	0%	0%	0%
Thomson Reuters	21%	0%	0%	0%	13%	20%
Tyler	7%	50%	17%	20%	38%	20%
Xerox	0%	0%	17%	0%	13%	0%

As with other administrative software, property tax software developed by a vendor can be more efficient and have less risk than a custom homegrown system. One study argues that vendor software packages provide “more control over the solution, tend to have lower initial costs, leverage internal systems and experience, and may be relatively easily put in place component by component.”<sup>10</sup>

Local governments across the United States have also had success with shared technological services, including collections software. For example, the Minnesota Counties Computer Cooperative offers “software and other cost-effective measures to substantially reduce technology costs for counties, cities, and agencies,” including tax systems. Thus, 18 counties have simultaneously adopted Thomson Reuters’ software, which as discussed below, is capable of higher frequency property tax collection (installments) relative to traditional annual or biannual collections.

### **Software Enabled Monthly Installments**

#### ACS Tax System

ACS Tax System offers the Tax Billing Collection System. It is a suite of software programs that can be used by state, county, and city governments for different types of taxes. On a “Product Functions and Specifications” sheet, the Tax Billing Collection System offers installments as a billing feature.

<sup>10</sup> See USAID. 2013. “USAID’s Leadership in Public Financial Management: Information Technology for Tax Administration.” Retrieved from [http://pdf.usaid.gov/pdf\\_docs/pnaea485.pdf](http://pdf.usaid.gov/pdf_docs/pnaea485.pdf)

## Harris

As part of Harris Govern, MSGovern offers Govern Suite, a “Full Enterprise Resource Planning (ERP) Solution” for tax billing and collections. The software suite has five modules which form the complete ERP system. One of the features of the Govern Suite is that it has “flexible billing options,” which provide a government client with the opportunity to “generate bills annually, bi-annually, quarterly or monthly for regular, prorated, or estimated taxes.” Additionally, Harris Govern can provide adjustments throughout the year, potentially in the event that the government changes its billing cycle or a taxpayer decides to shift to a different frequency of payments.

## Thompson Reuters

Thompson Reuters offers Aumentum Tax. This system has ten different components, ranging from assessment administration to cashiering. The Aumentum system allows for real time collection of payments, and can be configured to allow for payment plans on an installment basis rather than only providing traditional annual or biannual lump sum collection.

## Tyler Technologies

Tyler Technologies offers iasWorld, Eagle Treasurer, Incode Property Tax Management, CLT, Munis, Orion, and Tax-Wise. Some systems such as iasWorld have multiple components as with MSGovern and Aumentum. It can be integrated with a Computer Assisted Mass Appraisal (CAMA) system as well as a tax system. In regard to the latter, which is called iasWorld Tax, it offers “user-defined installment payment plans.” This feature is considered as “notable” in response to the evolving needs of governments.

## **Cost Estimates for System Replacement**

Costs for system replacement depend on a variety of factors, such as the number of property parcels a local government assesses, the complexity of tax laws, and the amount of “change” represented in the transition.

## **Cost Ranges to Configure Existing Software for Monthly Installments**

If a government has already implemented software such as Aumentum from Thomson Reuters or Govern from Harris Govern that provides for more frequent billing or installment payment options, costs would be related to configuring the software to accommodate monthly property tax installments. GFOA estimates the configuration process could take anywhere from one month to six months (100 to 500 hours), which may be covered by the service contract that a government has with a software vendor. These hourly estimates are based on conversations with software vendors.

The configuration process would require the involvement of the software vendor and the government electing monthly property tax payments. Often, governments will have a contract with the software vendor for ongoing maintenance, training, and product upgrades that could be

utilized for this project. The project would then be managed with hourly charges for consulting time or by developing a fixed fee scope of work.

### **Cost to Switch to New Software Vendor Offering Monthly Installments**

Costs for a government deciding to switch from a custom home-grown system (or any other software platform without monthly installment configuration options) to a software vendor which offers monthly property tax installment include licenses, hardware, system installation and configuration, data conversion training, and other professional services. These estimates are calculated after reviewing contracts from multiple governments around the United States for property tax systems.

Estimates are disaggregated by software module and implementation costs. Additional costs which are not directly accounted for may include internal changes such as training for internal IT employees and conversion of existing data and processes. A range is provided given that system replacement depends on a variety of factors, therefore low and high estimates are detailed in the tables which follow.

**Table 3**

<b>Estimated Costs - Small Government</b>		
<b>Category</b>	<b>Low Estimate</b>	<b>High Estimate</b>
Property Tax Software	\$25,000	\$150,000
Project Costs (Implementation)	\$200,000	\$400,000
<b>Total Project Costs</b>	<b>\$225,000</b>	<b>\$650,000</b>

**Table 4**

<b>Estimated Costs - Large Government</b>		
<b>Category</b>	<b>Low Estimate</b>	<b>High Estimate</b>
Property Tax Software Module	\$750,000	\$3,000,000
Project Costs (Implementation)	\$2,500,000	\$6,000,000
<b>Total Project Costs</b>	<b>\$3,250,000</b>	<b>\$9,000,000</b>

To make the switch easily and at a minimal cost, governments can research software vendors that offer monthly property tax installments. They can start with a Request for Information (RFI), which gives software vendors the opportunity to provide information on their monthly property tax installments. Once they have obtained enough information, they can prepare a Request for Proposal (RFP), to obtain proposals from companies able to provide software, implementation, and long-term maintenance for a monthly property tax system. A government can then decide on the project based on cost comparisons and the software features that best meet their needs for property tax installments.

## Implementation Challenges in Software Switching

### ERP Optimization and Administrative Challenges

If a government decides to switch to and implement monthly tax installments, there are multiple challenges they will face in the short-run, but they may accrue a variety of long-term benefits. Under the assumption that monthly tax installments is part of a larger ERP system for tax administration, there are known implementation challenges but a variety of recommended practices to mitigate such concerns.

First, a government considering switching software should review business processes to ensure that the ERP system is applied to an efficient and effective process. The optimization process has multiple stages, including requirements, business process analysis, implementation, and evaluation.<sup>11</sup>

As part of the analysis, the government should clearly identify:

- How will a change to property tax collection systems affect other tax related functions and systems?
- How will a change to property tax collection systems affect non-tax functions and computer systems related to financial management and performance management?
- Will there be increased administrative costs with monthly tax installments? For example, will additional administrative staff be needed to process tax collections?

### Homegrown System and ERP System Adoption

In the case that a government decides to maintain a homegrown system, but adopts a monthly property tax collection system, they should still review business processes. Emphasis should be placed on the ability of staff members to modify their system to allow for monthly property tax installments. If staff members have the technical capability to modify their system, without any risk to the stability of property tax collection from an administrative perspective, then they may choose to maintain their system.

In terms of monthly property tax installments, the decision to maintain a homegrown system or purchase a vendor platform depends on the needs and resources of the government.<sup>12</sup> Only the government can evaluate its current position, and then weigh the costs and benefits of a homegrown system.

Case study research shows that the shift from homegrown systems to a software vendor can reduce concerns of security and maintenance with custom legacy platforms. This can be relevant as government employees who maintain these systems retire, and the cost of training new employees and retaining them for their skills may over time equal or exceed the cost of an ERP.

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<sup>11</sup> Rob Roque. 2010. "Optimizing ERP in Your Organization." *Government Finance Review*.

<sup>12</sup> See "Financial Information System for California." Retrieved from [http://www.fiscal.ca.gov/resources/special\\_project\\_reports/documents/spr\\_2.pdf](http://www.fiscal.ca.gov/resources/special_project_reports/documents/spr_2.pdf)

Some states such as Massachusetts actually recommend that their municipalities avoid homegrown systems due to the complexity and costs of adoption.<sup>13</sup>

### **Citizen Adoption**

Despite the potential benefits of monthly property tax installments, one implementation concern is how to publicize and inform citizens of changes. This will potentially require public meetings, mailings, and updated online resources explaining the shift from annual or biannual to monthly property tax collection and installments.<sup>14</sup>

One point to note is that many governments with a quarterly or monthly property tax installment plan also allow for more traditional annual or biannual payments. For example, Franklin County, Ohio, does not require citizens all to pay on a monthly basis. In fact, research conducted for this report on the fifty largest cities in the United States and cities in Canada did not reveal any exclusively collecting on a quarterly or monthly basis. Providing flexibility can allow property taxpayers to select the option that best suits their needs, and can even allow them to switch installment frequencies each year depending on changes in their budgeting behavior.

### **Main Challenges in Switching Software**

There are four main challenges in switching software. These include institutional constraints, local context, technological challenges, and long-term support.

(1) The first concern begins with the institutional context of a government, and understanding how the switch to monthly tax installments may or may not conflict with state tax law. In some cases, such as Florida, there are laws governing the way higher frequency installment plans on a quarterly basis are run. There is no legislation, however, either allowing or disallowing monthly property tax payment. Thus, in Florida and other states, local governments would have to conduct an analysis of institutions and laws to understand if a monthly property tax payment plan is feasible.

(2) After the question of institutions is addressed, a second concern is the local context. Even if monthly property tax payments appear to be a valuable idea that could benefit taxpayers and government, it must be accepted by taxpayers. There is extremely limited data on taxpayer adoption of monthly plans, with only one city, Kalamazoo, MI reporting that it had less than 20 percent adoption while the program was in place.<sup>15</sup> Thus, before a government invests resources and considers a monthly property tax plan, it is recommended that they hold public outreach meetings to understand how taxpayers perceive the current property tax collection method and the proposed monthly property tax installments.

It is relevant to note that all governments which offer higher frequency property tax installments, whether quarterly or monthly, do not require all taxpayers to participate. In many cases,

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<sup>13</sup> See <http://www.mass.gov/dor/docs/dls/it/pdfs/cama1.pdf>

<sup>14</sup> For additional information on citizen engagement at the local level see “A Local Leader’s Guide to Community Engagement and Building Public Trust.” ICMA

<sup>15</sup> [http://www.mlive.com/news/kalamazoo/index.ssf/2009/01/kalamazoos\\_12installment\\_taxpa.html](http://www.mlive.com/news/kalamazoo/index.ssf/2009/01/kalamazoos_12installment_taxpa.html)

taxpayers who are delinquent on taxes are excluded from monthly installments. There are incentives that some governments offer, however, to increase adoption. In some Florida counties, such as Broward, quarterly payments can yield a 6 percent, 4.5 percent, and then 3 percent discount for the first three quarter prepayments on property taxes.<sup>16</sup>

(3) After a government has decided to pursue monthly property tax installments, it must determine if its current system does or does not allow for configuration of monthly property tax installments. There will be greater challenges in switching from a custom homegrown system to a software vendor than simply reconfiguring software from a vendor. There must be emphasis placed on understanding how this change will conflict with other systems, such as billing, and additional administrative burden that may result.

(4) Long-term support indicates that the monthly property tax payment system will continue to be in place. The program should be evaluated on an annual basis in order to justify its continued use to determine whether delinquency decreases. If delinquency decreases, the government should consider if different methods of civic engagement can increase adoption by citizens.

## **Related Software Systems**

### **Major Systems**

Property tax collection is related to other software platforms for assessment and government financial management. The assessment process is done through Computer Assisted Mass Appraisal (CAMA). A property assessor has to physically inspect the property, but with a CAMA, they automate the assessment process and have it integrated directly into a broader tax system. CAMA records are stored in a database but software is necessary to ensure that any automated updates or corrections to the assessment over time can be readily made.

There are different dimensions to a CAMA system. These include data management, valuation, performance analysis, and assessment administration.<sup>17</sup> In terms of data management, the system must be able to correctly save, store, edit, and retrieve the data, likely in a central repository where all parcel information is located. For valuation, it is argued that “automated applications of the sales comparison, cost, and income approaches to value” should each be emphasized by the CAMA. Typical features of valuation include the ability to change values in relation to geographic location and conduct statistical analyses, such as a hedonic price model. In regard to assessment performance, this concerns the accuracy of the property assessment generated by CAMA relative to sales value. Finally, assessment administration concerns the actual process and systems for collecting taxes, which are discussed below.

Once the property assessment process is complete, then another software system is necessary to actually develop property tax statements, whether hard copy or digital. This is commonly

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<sup>16</sup><http://www.broward.org/RecordsTaxesTreasury/FrequentlyAskedQuestions/Pages/PropertyTaxInstallmentpayments.aspx>

<sup>17</sup> See <http://www.mass.gov/dor/docs/dls/it/pdfs/cama1.pdf>

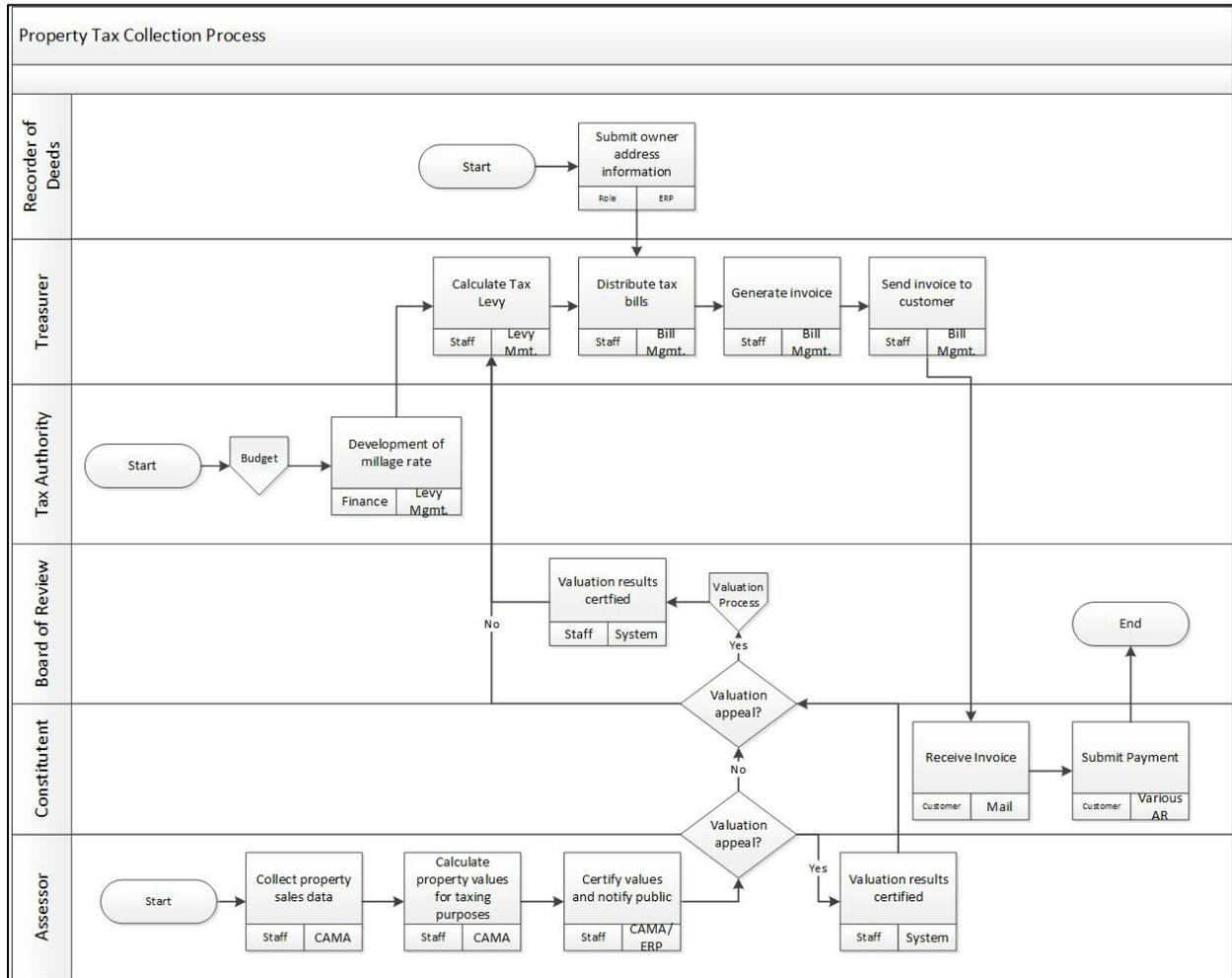
referred to as levy and billing management. It is helpful to ensure that tax statements are accurate and reflect the payment terms on the assessed property.

Cashiering and accounts receivable systems are also part of tax collection. Both can be used to track the receipt of payments and delinquencies. Often, separate systems are developed for delinquency, to provide calculation of interest and fees. The software can also create notices for delinquent taxpayers, so that they are aware of the ramifications if they do not pay. In some cases, notifications may also be related to delinquent payment plans, to help taxpayers budget for their overdue taxes over time rather than pay a lump sum.

Data collection on tax revenue can also be used in financial management systems aimed at processes such as forecasting. For example, delinquency rates can be calculated after a collection period has ended, and used to revise a forecast. As discussed later, if a government collects revenue more frequently, such as monthly, there is a greater chance that over time they can detect outlier months for revenue and be able to respond to them with appropriate decisions.

The next section provides a software process flow map. The columns list different stakeholders involved in the property tax collection process. Arrows indicate the direction of processes and related software systems. The process starts at the assessor level.

## Software Process Flow Map



### Recommended Practices

The following recommended practices should be observed by governments. First, for governments considering a shift to monthly property taxes:

- Conduct a cost-benefit analysis considering short-term costs and long-term benefits.**<sup>18</sup> The costs of adopting an upgraded or new tax collection system to accommodate monthly installments may initially be high, especially for a small government, but the long-term benefits from reduced delinquency may make it an investment with long-term benefits.

<sup>18</sup> See Rowan Miranda, Shayne Kavanagh, and Robert Roque. 2002. "Technology Needs Assessments: Evaluating the Business Case for ERP and Financial Management Series." GFOA Technological Solutions Series.

- **Consider historical delinquency rates and the needs of property taxpayers.**<sup>19</sup> If a local government has a low historical delinquency rate, and has adjusted forecasts and budgets for this expectation, then a monthly property tax payment may not be necessary. Also, consider if taxpayers would benefit from a monthly system, and if they are receptive to this change. Institutional norms and behavioral expectations of taxpayers may challenge adaptation to a change in property tax collection.
- **Consider compliance with state laws.** Is it legal to accept payment for property taxes on a monthly basis? Some states such as Texas have specific rules dictating how property taxes should be collected and any exemptions or changes that are allowed. Ensure that the legal and institutional environment will not challenge a monthly system after it is implemented.
- **Consider if a shared services arrangement with other governments can reduce property tax collection costs.** The cost of technology services to run government is sizeable, but efficiencies can be obtained by sharing services, such as a server or software program with other cities or counties.

There are also recommended practices for implementation of a monthly property tax system. These practices include:

- **A business process analysis should be conducted.** This can provide insight into the different technical and administrative challenges that may result, but allow for strategic planning to respond to them and successfully collect taxes on a monthly installment basis.
- **Include stakeholders in discussions regarding monthly property tax installments.** Ensure that taxpayers are informed about the shift from a traditional annual or biannual collection to a monthly installment basis. This can be achieved with public and online meetings and notifications via mail or email. Additionally, polling or surveying of citizens would provide insight about their interest in monthly property tax installments. Overall, interactions with the public should clearly communicate the benefits of the change in policy for the government as well as taxpayers who can now budget for property tax payments on a monthly basis.

### Monthly Tax Installment Benefits

A range of benefits may result from monthly property tax installments. In the case of complete adoption of monthly installment payments, a government may be able to better detect when delinquencies are on the rise, and adjust its spending or reserves behavior in an appropriate manner. Providing the government information on a more frequent basis may lead to more optimal decisions.

Monthly tax collection may improve financial management by providing a means for anticipating volatility. A government can better understand its current position if it is able to

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<sup>19</sup> There is limited research on property tax delinquency but a related literature on broader question of politically motivated tax revolts in the US. This is beyond the scope of this research report, but a relevant primer to start with: Issac Martin. 2008. *The Permanent Tax Revolt: How the Property Tax Transformed American Politics*. Stanford, CA: Stanford University Press.

track pre-payment delinquency on a monthly basis, thereby providing more time to address and potentially reduce revenue volatility. Decreased revenue volatility can be critical to government financial sustainability, particularly in the years following the Great Recession.

Additional benefits include increased trust between government and taxpayers. For example, the behavioral shift from a lump sum property tax payment to monthly installments may change the perceptions of government at the local level. In Kootenai County, Idaho, the treasurer was able to help families facing significant economic hardships by offering monthly property tax collection, so that the families would not have to pay in a lump sum and face economic challenges. A public finance official in Kootenai said that offering monthly property tax payments is part of their goal to provide “helpful service to our constituents.”<sup>20</sup>

Trust in government and greater acceptance of the property tax may be a potential result. If so, research generally shows that increased trust between stakeholders, such as taxpayers and government administrators, will increase the chance of financially sustainable government. Of course, the benefits of trust in government depend on adoption, which is identified as an implementation challenge in an earlier section of this report. For example, Kalamazoo, Michigan had less than 20 percent participation in a monthly property tax collection program, which may indicate that citizens either did not know or did not fully understand the potential benefits of this option. Thus, the benefit of trust depends on how well the government can inform the public about monthly property tax installment plans.

From a behavioral perspective, research has shown that benefits can result from building trust in government. Although a search of major databases such as JSTOR did not yield any research focusing on monthly property tax installments, there is a related body of work on property tax delinquency. An experiment conducted in Peru showed that small behavioral incentives, such as sending a tax reminder, had a statistically significant effect on decreased delinquency.<sup>21</sup> The results cannot be directly generalizable to the United States, due to clear differences in context, but the aforementioned paper and related literature generally shows that minor changes can help to build trust and reduce delinquency on behalf of taxpayers. It is possible that monthly property tax installments may also work to help decrease the delinquency rate, given that it is a behavioral incentive which may better align with the budgeting behavior of taxpayers.

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<sup>20</sup> See <http://www.govtech.com/budget-finance/What-Technology-Can-Do-for-Tax-Administration.html>

<sup>21</sup> See International Monetary Fund. 2015. “Current Challenges in Revenue Mobilization: Improving Tax Compliance.”

## Appendix

### Property Tax Collection Responsibility

	City	County	State		City	County	State
Alabama		✓		Montana		✓	✓
Alaska	✓	✓		Nebraska		✓	
Arizona		✓		Nevada		✓	
Arkansas		✓		New Hampshire	✓		
California		✓		New Jersey		✓	
Colorado		✓		New Mexico		✓	
Connecticut	✓			New York		✓	
Delaware	✓			North Carolina		✓	
Florida		✓		North Dakota		✓	
Georgia		✓		Ohio		✓	
Hawaii		✓		Oklahoma		✓	
Idaho		✓		Oregon		✓	
Illinois		✓		Pennsylvania		✓	
Indiana		✓		Rhode Island	✓		
Iowa		✓		South Carolina		✓	
Kansas		✓		South Dakota		✓	
Kentucky		✓		Tennessee		✓	
Louisiana		✓		Texas		✓	
Maine	✓			Utah	✓		
Maryland		✓		Vermont	✓		
Massachusetts	✓			Virginia		✓	
Michigan	✓	✓		Washington		✓	
Minnesota		✓		West Virginia		✓	
Mississippi		✓		Wisconsin		✓	
Missouri		✓		Wyoming		✓	