Strategizing Utilities Debt Management with a Three-Pillar Analytics Approach

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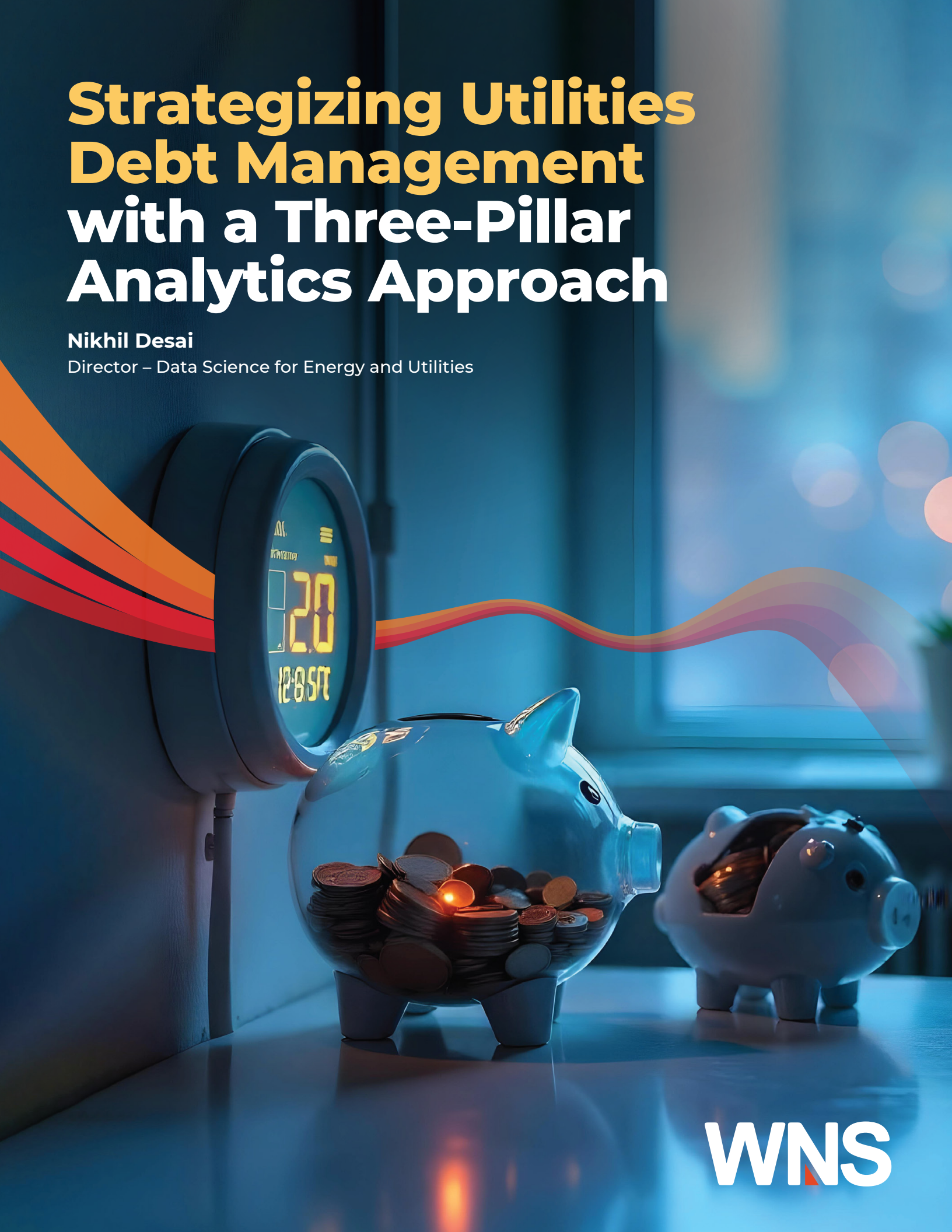

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Managing customer payments is becoming increasingly complex in the rapidly evolving Energy and Utility (E&U) sector. Economic uncertainties, coupled with higher unemployment rates, have resulted in escalating customer defaults. According to the National Energy Assistance Directors Association (NEADA), one in six US households is behind on their energy bills. By December 2023, the national arrears reached a record USD 20.3 Billion, up from USD 17.7 Billion earlier in the year.[1] In the UK, regulatory bodies are taking proactive steps, including raising the energy price cap to safeguard suppliers from financial collapse.[2]

E&U providers are additionally challenged by stringent consumer protection regulations designed to minimize environmental impact, protect vulnerable customers and ensure safety compliance. These challenges are compounded by certain customer segments exploiting loopholes in E&U processes, leading to increased defaults and revenue losses.

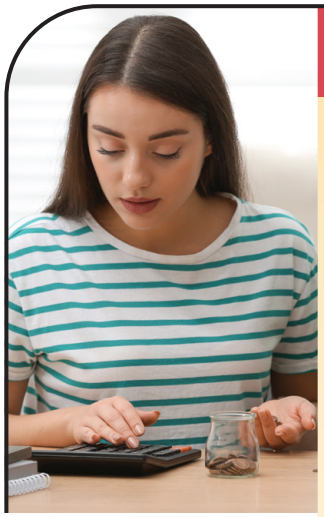
In this constrained environment, how can E&U companies mitigate bad debt write-offs? This paper outlines a three-pillared framework that leverages **predictive analytics, Generative AI (Gen AI)**, **speech analytics** and **income-qualified customer strategies** to enhance collections, minimize bad debts and foster customer loyalty.

[1]https://www.usatoday.com/story/money/personalfinance/2024/04/05/heating-and-cooling-bills-americans-cant-pay/73206115007/
[2]https://www.reuters.com/world/uk/britains-ofgem-proposes-one-off-price-cap-adjustment-tackle-bad-debt-2023-12-15/

A Three-Pillar Approach to Analytics-driven Debt Management

As customer behaviors become more complex, it is essential for E&U providers to adopt an **analytics-driven approach** that integrates Artificial Intelligence (AI), Gen AI, speech analytics and customer segmentation. This strategy enables providers to predict defaults, prioritize collections and optimize customer engagement efforts.

Leveraging advanced Machine Learning (ML) algorithms and data-driven insights, companies can better understand customer profiles, forecast delinquency risks and build resilient revenue protection strategies.



Pillar 1

Identifying High-Risk Customer Behaviors

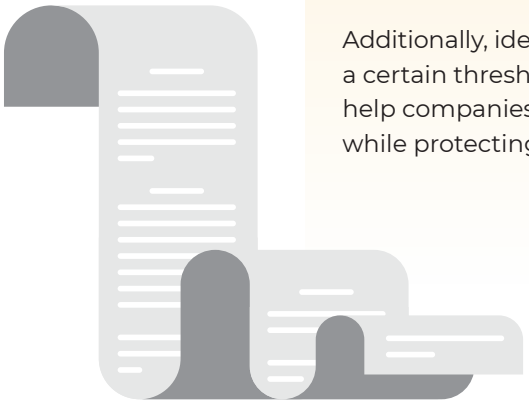
Traditional billing models, such as post-usage charges, leave E&U companies vulnerable to defaults as they lack real-time insights into a customer's financial situation. The first step in mitigating bad debts is accurately identifying high-risk customer behaviors using advanced analytics.

Predictive models leverage data from various sources, such as payment history, credit scores, demographic data and broader market trends. By analyzing these factors, E&U companies can segment customers into high, medium and low risk categories and design tailored interventions. **Gen AI** can further enhance this process by generating new customer insights and identifying hidden patterns that traditional models may miss.

For example, Gen AI can synthesize data from internal and external sources — including **social media activity** and **consumer sentiment analysis** — to generate predictive models that identify behavioral shifts in real-time, helping companies respond proactively.

Speech analytics also plays a vital role in identifying customer sentiment and behaviors. By analyzing interactions from customer service calls, speech recognition tools can detect signs of stress, confusion or frustration, which could indicate financial distress. These insights can then be used to adjust collection strategies and offer personalized payment plans.

Additionally, identifying **income-qualified customers** — those whose income is below a certain threshold and who may be eligible for financial assistance programs — can help companies implement targeted strategies that relieve vulnerable customers while protecting revenue.



Pillar 2

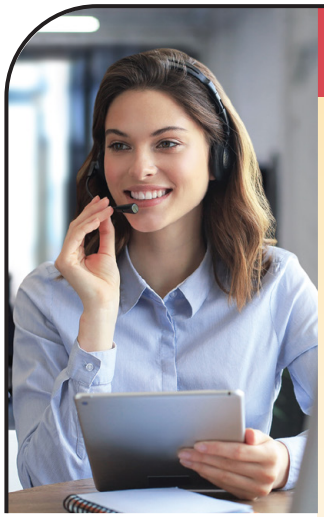
Building a Predictive Prioritization Matrix

Once high-risk customers are identified, E&U providers must prioritize collections based on the **debt value** and the **propensity to re-pay**. Predictive models create a prioritization matrix, mapping out customers based on these two parameters. This ensures that collection efforts are focused on accounts with the highest recovery potential.

The prioritization matrix can be segmented as follows:

- **High debt, high likelihood of re-paying:** These customers should be prioritized for immediate collections actions.
- **High debt, low likelihood of re-paying:** Strategies such as early settlement offers or debt write-offs may be considered.
- **Low debt, low likelihood of re-paying:** These accounts may be deprioritized or written off due to high recovery costs.
- **Low debt, high likelihood of re-paying:** These accounts may benefit from proactive payment plans and early intervention.

Using **Gen AI** in this context enables the dynamic creation of customer profiles and real-time adjustments to the prioritization model as new data becomes available. By continuously learning from customer behaviors, AI models evolve to reflect the changes in economic conditions, payment patterns and financial health.



Pillar 3

Elevating Customer Experience through Tailored Engagement

Collections processes in the E&U sector must be balanced with an ongoing commitment to customer satisfaction, especially as utility bills are considered non-discretionary spending. **AI-powered solutions** can help companies personalize their interactions with customers, ensuring that debt recovery is not only effective but also empathetic.

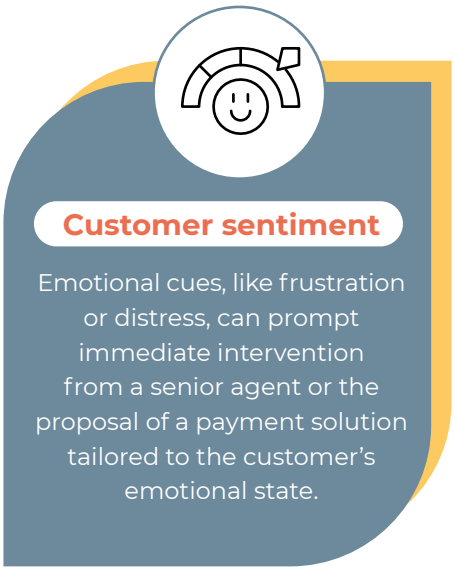
Speech analytics, for example, can provide customer service agents with real-time insights during phone interactions, allowing them to adjust their communication style based on the customer's emotional state. These insights enable agents to engage in more empathetic conversations, which can increase customer commitment to payment plans.

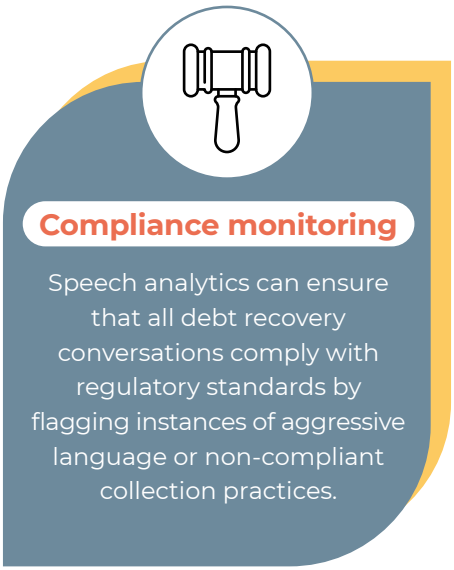
Gen AI can also be employed to enhance **chatbot** and **virtual assistant** capabilities, enabling them to handle common debt-related inquiries and payment arrangements. By leveraging AI's ability to generate personalized responses, providers can automate much of the low-touch engagement, freeing up agents for more complex issues.

Additionally, advanced **income-qualified customer** segmentation is crucial for maintaining regulatory compliance and ensuring that financially vulnerable customers are not overburdened. Targeted outreach programs incorporating financial assistance, flexible payment plans and pre-payment meter options can help reduce defaults among income-qualified customers while preserving goodwill.

Role of Speech Analytics in Improving Debt Collection

Speech analytics plays a pivotal role in automating and optimizing customer interactions during the debt collection process. By leveraging speech recognition and Natural Language Processing (NLP) techniques, E&U companies can analyze every customer-agent conversation to identify critical insights, including:





By integrating speech analytics with **predictive models**, E&U companies can automate real-time decision-making during customer interactions, improving both collection efficiency and customer satisfaction.

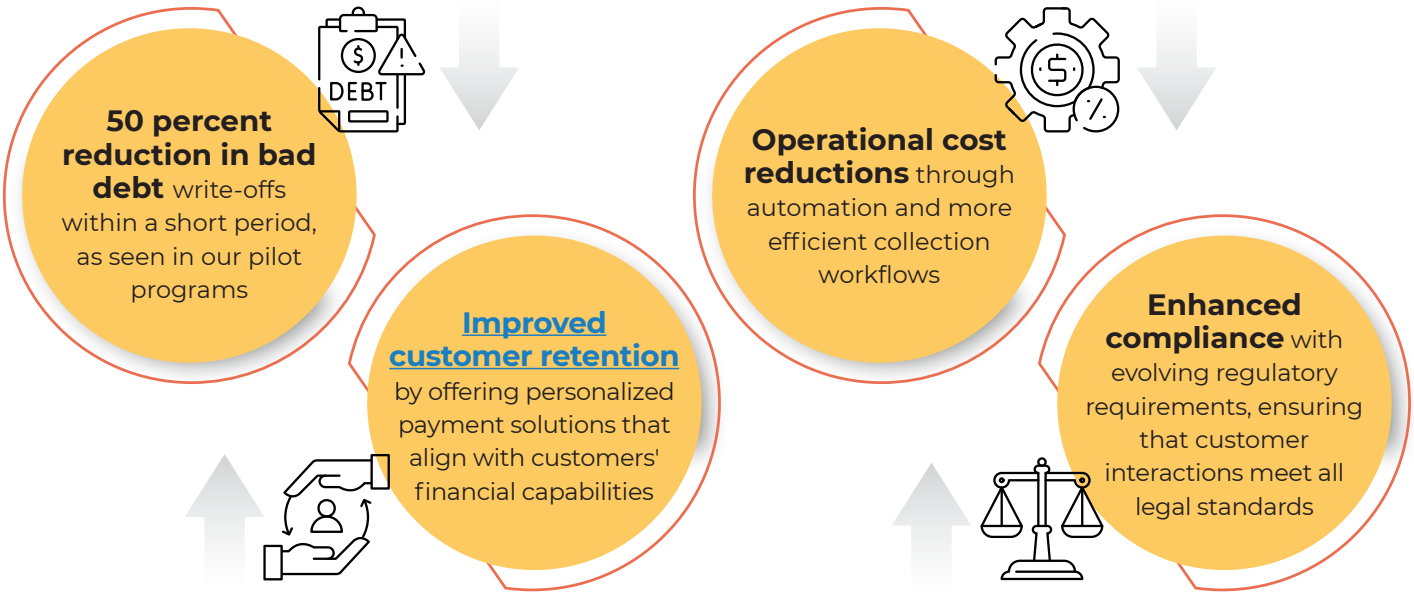
Unlocking the Power of Predictive Analytics and Gen AI for Operational Efficiency

E&U companies often rely on traditional "dunning paths" to pursue overdue payments, escalating accounts to **Debt Collection Agencies (DCA)** once in-house efforts have failed. In our experience, DCAs typically recover only 10-15 percent of overdue debts and charge high commissions (25-50 percent). Predictive analytics combined with Gen AI can help companies reduce reliance on DCAs by enhancing early-stage collection efforts.

For example, predictive dialers and **Computer Telephony Integration (CTI)** systems allow for intelligent call routing and real-time data-driven insights, ensuring that agents can optimize every customer interaction. By integrating Gen AI into these systems, companies can further personalize outreach, offering flexible re-payment solutions based on individual customer profiles.

Benefits of Reducing Consumer Bad Debt Write-Offs

The benefits of adopting predictive analytics and Gen AI in debt management are clear:



Integrating Gen AI and advanced analytics into the debt collection process enables E&U companies to effectively navigate challenging financial landscapes. This approach not only improves their bottom line but also fosters stronger customer relationships.

Case Study: **Transforming Debt Recovery for a Fortune 500 Energy Retailer**

A major US-based energy and gas retailer faced significant challenges in managing escalating bad debts, high DCA commissions and complex regulatory requirements. Through the application of our three-pillar framework, the company achieved:

50% **increase in debt recovery** within six months

20% **reduction in operational costs** by streamlining collections processes

8% **improvement in conversion rates** by shifting from a traditional collections approach to an AI-driven, customer-centric strategy

This success was driven by a combination of predictive models, speech analytics and Gen AI, which allowed the company to proactively engage customers and tailor solutions to enhance recovery rates and customer satisfaction.

Conclusion: Building Resilience with Data, Innovation and Empathy

As demand for electricity and utilities continues to grow, the need for advanced analytics, Gen AI and speech analytics becomes more critical in ensuring financial stability and operational efficiency. By adopting a data-driven approach to debt management, E&U companies can minimize bad debt write-offs, improve collections outcomes and enhance customer relationships — all while maintaining compliance with regulatory requirements.

The integration of predictive analytics, AI technologies and a customer-centric focus on income-qualified customers will help build a more resilient E&U business model, one that can navigate economic uncertainties, reduce revenue leakage and improve long-term sustainability.

Keen to assess your organization's collections maturity against industry benchmarks?
Click here to take our free assessment

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