Artificial Intelligence and Blockchain in the Mortgage Industry

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ARTIFICIAL INTELLIGENCE

Texas Responsible Artificial Intelligence Governance Act

- On June 22, 2025, Governor Abbott signed HB 149, the "Texas Responsible Artificial Intelligence Governance Act" (the Act or TRAIGA), making Texas the third US state, after Colorado and Utah, to adopt a comprehensive artificial intelligence (AI) law.

- Effective Date – January 1, 2026

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Texas Responsible Artificial Intelligence Governance Act

The bill will:

- establish baseline duties for AI "developers" and "deployers,"
- create a first-in-the-nation AI regulatory sandbox,
- grant enforcement authority for the Attorney General (AG) to pursue civil penalties and injunctive relief,
- Grant enforcement authority for a state agency that is a licensing authority (including SML) to impose sanctions, and
- broadly preempt local ordinances governing AI.

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Developers **may not**:

- Intentionally design AI systems to:
  - Encourage **self-harm**, **violence**, or **criminal activity**.
  - **Discriminate** against protected classes (race, sex, religion, etc.).
  - **Infringe constitutional rights**.
  - **Manipulate behavior** in harmful ways.
  - **Generate or distribute** illegal or sexually explicit content involving minors.

If biometric data is used to train an AI system, and that data is later used for a **commercial purpose**, the developer must:

- Comply with **data possession and destruction rules**.
- Obtain **explicit consent** unless the data was made public by the individual.

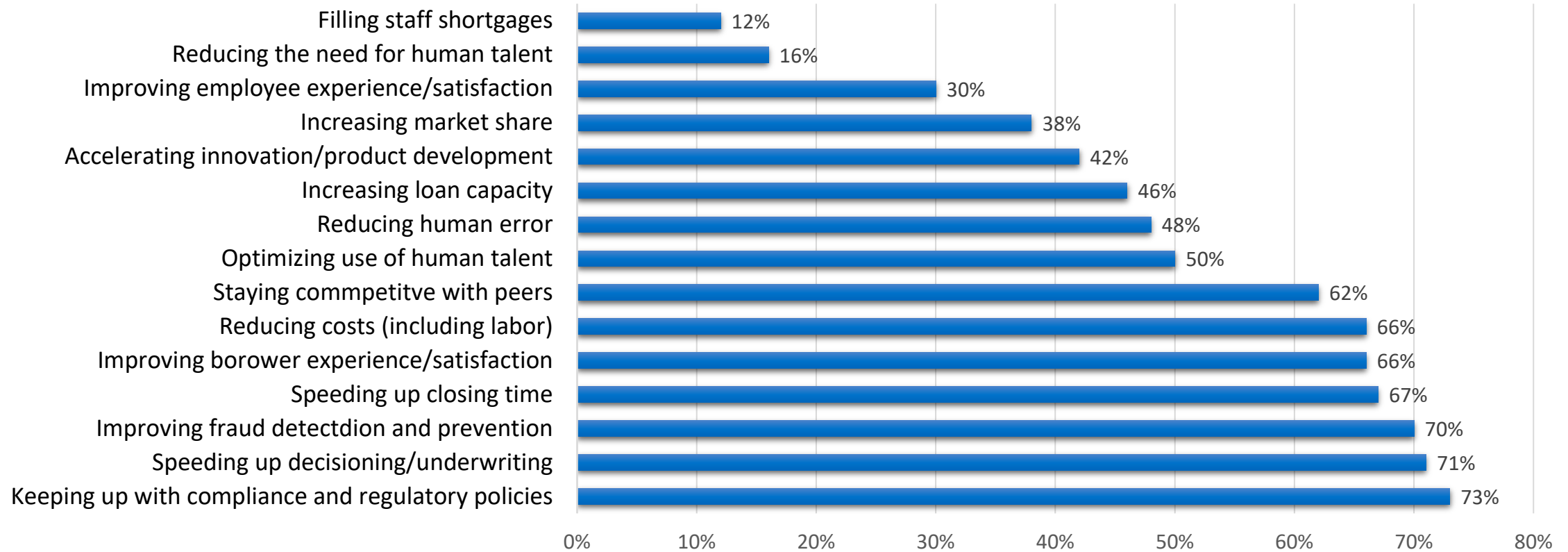DEPARTMENT OF
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Texas Responsible Artificial Intelligence Governance Act

- If a complaint is filed, developers may be required to provide:
  - Purpose and intended use of the AI system.
  - Types of data used for training and input.
  - Outputs generated by the system.
  - Performance metrics and known limitations.
  - Post-deployment monitoring and safeguards.
- Developers have **60 days** to fix violations after receiving notice from the Attorney General before legal action is taken.
- Developers are not liable if they are in compliance with recognized frameworks (e.g., NIST AI Risk Management Framework).

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Goals for driving technology strategy
(National Mortgage News – Emerging Tech Survey, 2025 n=123)

Goals driving Technology strategy

Goal	Percentage
Filling staff shortgages	12%
Reducing the need for human talent	16%
Improving employee experience/satisfaction	30%
Increasing market share	38%
Accelerating innovation/product development	42%
Increasing loan capacity	46%
Reducing human error	48%
Optimizing use of human talent	50%
Staying commpetitve with peers	62%
Reducing costs (including labor)	66%
Improving borower experience/satisfaction	66%
Speeding up closing time	67%
Improving fraud detectdion and prevention	70%
Speeding up decisioning/underwriting	71%
Keeping up with compliance and regulatory policies	73%

AI Adoption – Volume Size (Number of Units) (based on a Arizent survey data report)

Number of Loans Originated per year	Adoption Rate of AI
Less than 1,000 originations	30% or less
1,000 to 5,000 originations	68%
5,001+ originations	81%

Adoption of Technology – Bank vs. Nonbank

| Technology	Bank	Nonbank Mortgage Company
Loan origination system (LOS)	100%	100%
Credit scoring and analysis tool	93%	90%
Customer relationship management system (CRM)	88%	93%
Advanced fraud detection tools	82%	83%
Product pricing engine (PPE)	79%	95%
Digital closing technology (including eNote)	77%	71%
Data extraction tool to pull information from client files	81%	66%
Remote Online Notarization	44%	41%
Agentic AI (such as chatbots or virtual assistance for customers)	39%	37%
AI-driven underwriting	39%	32%
Copilots	30%	24%

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Common Mortgage AI Types

Predictive Decision Support uses data and algorithms to forecast outcomes and guide choices. Common in credit scoring, fraud detection, risk management, and business planning. (FICO, Cotality, Freddie Mac, Fannie Mae)

Computer Vision (CV) teaches machines to "see" and act on visual data. Used in image/object recognition, facial ID, medical imaging, and self-driving cars. (Paradatec, FoxyAI, loanlogics, Ocrolus)

Expert Systems are Rule-based programs that apply human expertise to solve problems. Common in medical diagnosis, finance, and troubleshooting. (NiCE, CallMiner, Verint, Liveperson, Cognigy)

Natural Language Processing (NLP) enables computers to understand and generate human language. Drives chatbots, translation, sentiment analysis, and text automation. (ICE Mortgage Technology, Sagent, bitb, Luxoft, Clarifire)
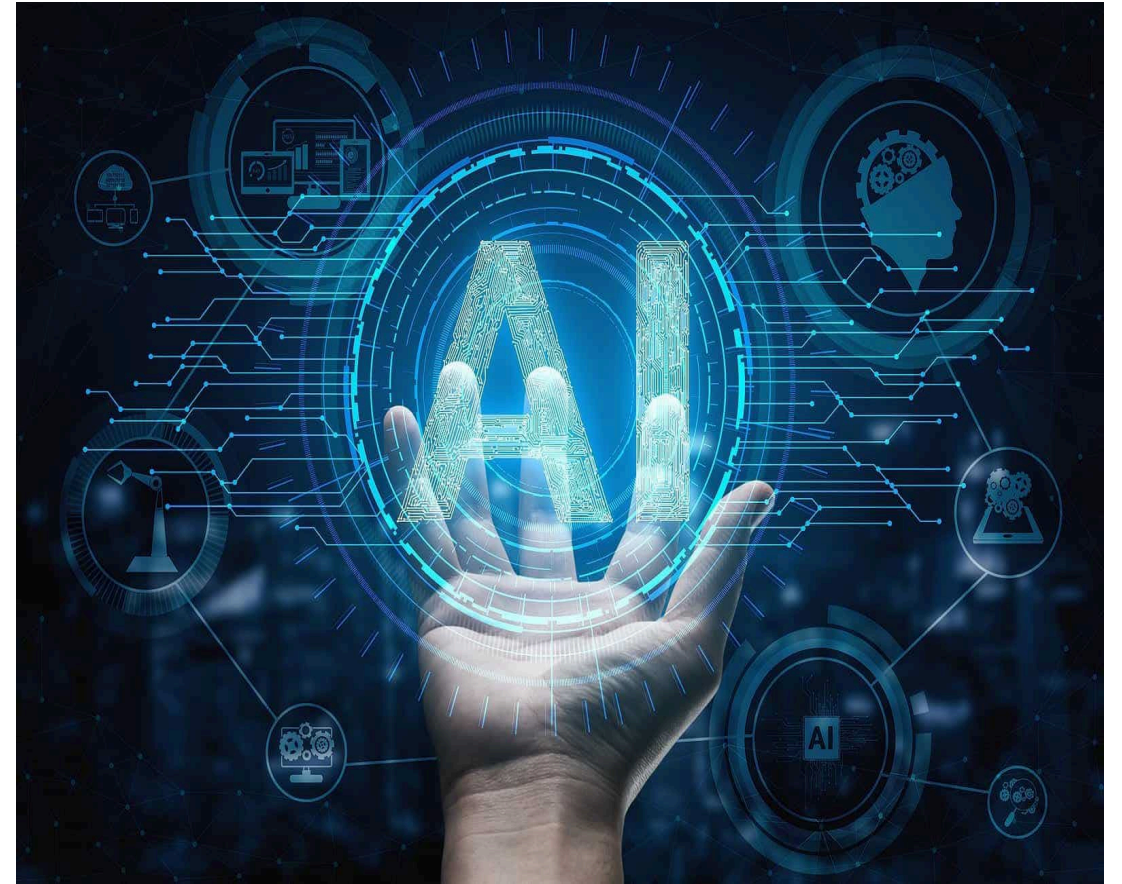
Common GenAI Use Cases in Mortgage

Technology	Description
Loan Inquiry Chatbot	A conversational AI chatbot on the lender's website that answers borrower questions about loan products and guides them through initial inquiries before migrating to deterministic or human-based pre-qualification step
AI Document Summarization Assistant	Automatically summarizes borrower documents (e.g. bank statements, tax returns) into key points for underwriters, speeding up the review process without making approval decisions.
Underwriting Guidelines Co-Pilot	An AI assistant that loan officers or underwriters query for quick answers on complex underwriting guidelines and product eligibility, providing clarifications in real time.
Appraisal Summary Narrator	Summarizes property appraisal reports into key takeaways and valuation rationale in narrative form, assisting loan officers in quickly understanding collateral details.
Regulatory Guideline Summarizer	A conversational AI chatbot on the lender's website that answers borrower questions about loan products and guides them through initial inquiries before migrating to deterministic or human-based pre-qualification step
Loan Officer Virtual Assistant	Acts as a real-time assistant for loan officers by listening to borrower conversations (with permission) and transcribing notes or pulling relevant information, allowing the loan officer to focus on the customer

Common GenAI Use Cases in Mortgage

Technology	Description
Pre-Approval Letter Drafting Assistant	Generates customized pre-approval letters for qualified applicants, including loan amount, estimated terms, and conditions, for loan officers to review before sending to borrowers
Customer Service Chatbot	Provides borrowers with instant answers to common servicing questions (loan balance, payment due date, escrow info) through a chat interface, using generative AI to understand inquiries and give helpful answers, letting the consumer know the answers are generated and may have mistakes.
Agent Assist Call Summary	Listens to customer service calls and automatically generates summaries and call notes (including key borrower issues and promised actions) for the servicing agent, reducing manual note-taking
Knowledge Base Assistant	Allows servicing agents to query an AI-powered knowledge base using natural language to quickly find answers in company servicing policies or procedures (for example, how to handle a military interest rate reduction), boosting first-call resolution.

Pillars of Enterprise AI

AI Policy is a formal, organization-wide document that defines principles, roles, processes, and expectations for the development, use, and oversight of AI systems.

AI Governance refers to the structures, roles, and decision-making mechanisms that ensure AI is managed in alignment with policy, ethical norms, and risk tolerances.

Responsible AI is the practice of designing, developing, and deploying AI systems in ways that are ethical, fair, transparent, and aligned with human values and legal standards.

AI Operations is the strategic and operational bridge weaving AI through the fabric of the organization. This is where policy meets people in day-to-day execution.

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Artificial Intelligence Policy

An Artificial Intelligence policy establishes a clear, organization-wide framework that defines how AI systems should be developed, procured, used, and governed responsibly – ensuring alignment with business goals, ethical principles, legal obligations, and risk management practices.

- Set expectations and boundaries for AI use across the organization
- Align teams on responsible practices, roles, and decision-making
- Mitigate risks such as bias, misuse, or regulatory violations
- Demonstrate accountability to regulators, customers, and the public
- Enable consistency across AI projects and life cycle stages

Template of AI Policy – NIST AI RMF and ISO/IEC 42001

Responsible AI

AI Developers and Providers must ensure responsible use of AI which will:

1. apply contextual guardrails that include limitations on the models and applicable data sources accessible to AI;

2. monitor real-world performance to address improper actions and hallucinations;

3. ensure operational accountability for the AI system;

4. embed core guardrails (answer only relevant questions relating to the mortgage industry);

5. disclose risks and limitations for the use of AI (AI Policy and disclosures to consumers);

6. monitor service providers for AI use and controls (especially if using a third-party AI provider); and

7. provide controllability tools.

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Top Legal Issues in GenAI

Copyright and Training Data	Authorship and Ownership	Right of Publicity	Patent Law	Liability for Harm	Data Privacy
Major publishers and creators are suing AI companies over whether using copyrighted material to train AI models constitutes fair use.	Ongoing legal uncertainty about who owns AI generated content and what level of human involvement is needed for copyright protection.	AI's ability to clone voices and likenesses is challenging existing personality rights laws as celebrities fight unauthorized use of their personas.	Courts and patent offices worldwide are grappling with whether AI can be listed as an inventor and if AI-generated inventions qualify for patent protection.	When AI systems produce harmful content, the legal system is struggling to determine who bears responsibility among platforms, developers, and users.	AI training on personal data is testing the boundaries of privacy laws and raising questions about consent and data rights.

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Mortgage Risk and Risk Mitigation

	Hallucinations	Privacy	Bias	Transparency	Harmful Content
Description	GenAI can create highly realistic but false information	Expose or disclosure of sensitive information	GenAI can reinforce societal biases and raise ethical concerns	GenAI results may not be explainable and mortgage companies must provide compliance	GenAI can generate offensive, violent, or manipulative material
Mitigation Techniques	• Proper prompt engineering • Human-in-the-loop • Retrieval augmented generations • Guardrails and evaluations • Integrating deterministic functions with GenAI	• Avoiding high risk scenarios entirely • Reliance on foundation model provider guardrails • Securing GenAI in a premise based or private cloud • Integrating and adapting open-source AI solutions	• Avoiding high risk scenarios entirely • Reliance on foundation model provider guardrails • Human-in-the-loop • Bias testing and model management • Model fine-tuning.	• Avoiding AI use in high-risk decisions • Human-in-the-loop • Integrating deterministic functions with GenAI	• Not exposing conversational AI to the consumer • Guardrails, evaluations, prompt engineering, and retrieval augmented generation

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AI Compliance Risk – TILA/Reg. Z

Truth-in-Lending Act – Regulation Z

1. **Inaccurate Disclosures** – AI-powered assistants of document generators may miscalculate or misstate key loan terms, leading to incorrect TILA disclosures. This risks consumers receiving misleading information and puts lenders in violation of Reg Z's disclosure requirements.

2. **Advertising Trigger Terms** – GenAI creating marketing content might include specific loan terms that trigger additional disclosure requirements under Regulation Z but fail to provide those additional details. This is a common source of compliance issues.

3. **Personalized Offers** – In the future, lenders may use GenAI to draft personalized loan offers and disclosure forms on the fly. Any AI errors or unauthorized changes to mandated wording and formats could results in TILA violations.

AI Compliance Risk – RESPA and Reg X

Real Estate Settlement Procedures Act and Regulation X

1. **Hallucinated Requirements** – A GenAI assistant could invent or misstate a RESPA requirement or procedure, confusing consumers and violating the law. An AI chatbot might erroneously tell a borrower to pay a "processing fee" or follow a step that is not actually required.

2. **Inadvertent Undisclosed Referrals** – If lenders use AI bots to answer questions about settlement services, the bot might steer borrowers towards a particular title insurer, realtor, or affiliate. Such AI driven referrals (especially to an affiliated business) without proper disclosure could raise Section 8 concerns about kickbacks or unearned fees.

3. **Automated Closings and Disclosures** – GenAI has the potential to speed up mortgage closing by summarizing or preparing documents. Using GenAI to fully automate the preparation of settlement statements and borrower communications could result in systemic RESPA violations.

AI Compliance Risk – ECOA and Reg B

Equal Credit Opportunity Act – Regulation B

1. **AI Bias in Decisions** – Generative AI or underwriting models may unintentionally discriminate against protected groups due to biased data or design, creating disparate impact and potential ECOA violations.

2. **Adverse Action Transparency** – ECOA/Reg B requires lenders to give clear reasons for credit denials. AI "black box" models often make this difficult, and regulators expect specific, accurate denial reasons, not vague or generic letters.

3. **Digital Redlining** – AI-driven marketing and pricing could inadvertently segregate or exclude borrowers based on factors like zip code or online behavior, effectively modern-day redlining. Regulators will closely watch to prevent steering or filtering that violates equal treatment.

AI Compliance Risk – Fair Housing Act

Fair Housing Act

1. **Biased Content Generation** – AI-generated property listings or ads can unintentionally include biased phrases (e.g., "Christian community," "perfect for young families"), which signal preferences or limitations based on religion, family status, or other protected classes. This creates risk of fair housing violations if unvetted.

2. **Discriminatory Ad Targeting** – AI-driven ad platforms may exclude or target protected groups by limiting who sees housing or mortgage ads. For example, automated delivery might stop showing offers to single mothers or minority neighborhoods, effectively creating digital steering in violation of FHA.

3. **AI-Enabled Redlining Comeback** – Advanced AI tools could reintroduce discriminatory practices by recommending neighborhoods based on race/ethnicity or by disadvantaging certain groups in lending or property valuation. Regulators fear these systems could replicate historic redlining under new technological forms.

AI Compliance Risk – Fair Credit Reporting Act

Fair Credit Reporting Act

1. **Accuracy & Dispute Handling** – AI-generated credit reports may introduce mistaken identity merges, fill-in errors, or invalid debts, making disputes harder for consumers and violating FCRA's accuracy requirements. Strict oversight is needed to fix AI-induced errors quickly.

2. **Adverse Action Notice Content** – When credit is denied, FCRA requires clear disclosures (credit bureau, score, key factors, right to a free report). AI-generated notices risk omitting or misstating required elements, especially if decision logic is opaque, leaving consumers unclear on "who/what/why."

3. **Third-Party AI Scoring** as Consumer Reports – AI models using nontraditional data (social media, rental history, online behavior) could produce creditworthiness scores treated as consumer reports under FCRA. This would trigger obligations for consent, dispute rights, and accuracy protections—even if not from a credit bureau.

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AI Compliance Risk – SAFE Act

SAFE Act – Tex. Fin. Code, Chps. 157 and 180

1. **Unlicensed AI Interactions** – The SAFE Act requires only licensed Mortgage Loan Originators (MLOs) to take applications and offer or negotiate the terms of a residential mortgage loan. If AI chatbots handle applicants' questions, recommend products, or collect application information, it may function as an unlicensed MLO, creating compliance violations.

2. **Disclosure of Identity** – Borrowers must be clearly informed when they are interacting with AI. If AI-generated messages lack proper disclosures, they may mislead applicants into believing they are communicating with a licensed MLO, increasing the risk of regulatory violations, consumer confusion, and misrepresentation risks.

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AI Compliance Risk - FDPCA

Fair Debt Collection Practices Act and Tex. Fin. Code, Ch. 392

1. **Unrestricted Contact & Harassment** – AI-powered debt collection systems could over-contact consumers (e.g., nonstop calls, texts, or emails) or initiate communication during restricted hours, easily violating FDCPA's strict limits on timing and frequency. Poorly controlled AI risks crossing into harassment or intimidation.

2. **Mistaken Identity & Consumer Harm** – Generative AI may confuse identities or wrongly match consumers, leading to pursuit of the wrong debtor or invalid debts. If AI fails to handle disputes properly, consumers may find it impossible to argue with an automated system, compounding FDCPA violations.

3. **Deceptive Practices & False Representation** – AI could create deceptive scripts or impersonations (e.g., sounding like a lawyer or official) that mislead consumers. Even subtle misrepresentation, or failing to clearly disclose AI's identity, could be treated as a violation. Regulators will closely monitor these high-risk "virtual collection agents."

AI Compliance Risk – TCPA and Privacy

Telephone Consumer Protection Act

- **Unrestricted Contact & Harassment** – AI-powered lead generating systems could over-contact consumers (e.g., no written consent) or initiate communication to individuals on the do-not-solicit lists, easily violating TCPA.

Gramm-Leach-Bliley Act (privacy) and Regulation P

- **Improper Sharing of Information** – AI-powered systems could improperly share information of applicants/borrowers that have opted-out of disclosure of non-public personal information.

BLOCKCHAIN

Blockchain

Texas Work Group on Blockchain Matters

- Established by HB 1576 (87th Legislature)
- Mandate: Develop a master plan for blockchain industry growth
- Focus Areas: Commercial law, digital identity, DAOs, education, energy, finance, government, and record-keeping.
- On November 7, 2022, the Texas Work Group on Blockchain Matters issued a report of its findings to the Texas Legislature: [Texas Work Group on Blockchain Matters Report | Open Data Portal](#).

- **Key Takeaways for Mortgage & Real Estate**
  - Blockchain can modernize land records and UCC filings
  - Potential to reduce fraud, increase transparency, and lower transaction costs
  - Legislative support is growing for blockchain adoption in official record systems

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Blockchain – Real Property Records

Current Challenges

- Paper-based, fragmented systems
- Prone to fraud, human error, and inefficiencies

Blockchain Opportunities

- Immutable chain of title
- Streamlined title verification
- Reduced administrative burden

Recommendation

- Pilot blockchain-based land registry systems in tech-forward counties

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Blockchain – UCC Financing Statements

Problems Identified

- Inconsistent searchability
- Risk of unauthorized filings
- Complex continuation and termination rules

Blockchain Solution

- Smart contract-based UCC-1 filing system
- Enhanced collateral tracking
- Optional digital authorization by debtors

Implementation Actions for Blockchain in Texas

Legislative Activity

- **House Bill 1043 (2025)** proposed a pilot program to explore a blockchain-based title registry system; however, the bill was not passed by the Texas Legislature.

- Currently, there are no initiatives for the development of blockchain-based title registry system and there are no mortgage companies utilizing a blockchain-based title registry system in Texas.

Questions?

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