

RESEARCH ARTICLE

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Government bonds for individuals: innovative alternative or risk to household savings?

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Abstract

This paper develops an empirical framework to evaluate the feasibility and macrofinancial implications of launching retail government bonds for individuals in Albania. Using official quarterly debt bulletins from the Ministry of Finance (2015–2025), we document a persistently bank-dominated domestic government-securities market: in 2025, banks hold 66.07% of domestically issued securities, while individuals hold 8.91%, down from ~15% in 2015–2018. We complement these statistics with debt sustainability and risk metrics (end-2025 debt-to-GDP 53.04%; debt maturing within one year 39.2%; average maturity 2.8 years) and examine the retail investment incentive through the spread between deposit rates (~1.9% in 2024) and sovereign yields across maturities (2025 average 12-month ~2.69%, 5-year ~3.79%). Drawing on OECD cross-country evidence on sovereign retail debt programs, we define design parameters—distribution channels, purchase caps, pricing rules, redemption features, and digital infrastructure—then implement a calibrated scenario model quantifying (i) potential shifts in the investor base (from banks to households), (ii) possible deposit substitution and credit-supply effects, and (iii) funding-cost impacts under alternative pricing rules. The resulting research design produces testable hypotheses and a reproducible pipeline for policy evaluation and future causal inference once program roll-out data become available.

Keywords: retail government bonds, public debt management, investor base diversification, domestic debt market, household savings mobilization, Albania

1. Introduction

Government debt management increasingly involves not only minimizing expected cost subject to risk constraints, but also managing investor-base concentration, rollover needs, and the resilience of domestic funding channels. The attached article proposes retail participation—“government bonds for individuals”—as a policy instrument to broaden the investor base and provide households a low-risk alternative investment channel, while recognizing a potential banking-sector tradeoff (deposit outflows and reduced lending)[2].

Official Albanian data confirm that the central-government debt ratio has fallen materially since the

pandemic peak, reaching 53.04% of GDP in 2025 (with domestic debt around 31.48% of GDP). [3] Yet refinancing exposure remains notable: 39.2% of the debt stock matures within one year (2025) and average time to maturity, while improved, is 2.8 years. [3] These constraints interact with the investor structure of domestically issued securities, where banks remain dominant and individuals currently hold a single-digit share. [3]

This paper reframes the article’s policy proposal into a researchable set of questions:

RQ1. What is the baseline structure and recent evolution of Albania’s domestic government securities

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investor base, and what does it imply for concentration risk and policy effectiveness? [3]

RQ2. Under realistic pricing and access rules, how large could retail demand be, and what portion would likely be funded by deposit substitution versus reallocation from other financial assets? [6]

RQ3. What is the net macrofinancial effect on (i) sovereign funding cost and risk; and (ii) banking-system deposit funding and credit supply—under alternative retail-program designs? [3]

The medium-term debt management strategy for 2025–2029 explicitly frames retail bonds as a potential development: it notes the intention to evaluate offering government bonds to individuals and highlights the importance of awareness, instrument variety, and an electronic/digital platform to support access. [4] This institutional commitment makes a rigorous *ex ante* evaluation both timely and feasible.

The modern policy rationale for retail sovereign debt programs can be structured into four mechanisms: investor-base diversification, volatility reduction, household savings channeling, and competition/financial inclusion. The OECD’s 2025 report states that sovereign retail programs aim to better capture household demand and diversify the sovereign investor base, and that retail investors are often less prone to sell during stress than some institutional investors; it also emphasizes household savings and financial inclusion objectives. [5]

Operationally, the OECD documents wide dispersion in distribution channels—banks, issuer platforms, brokers, post offices, state-owned enterprises, and hybrids—highlighting that many countries rely on bank distribution while a material subset build dedicated issuer platforms to reduce costs and improve access. [5] The report also cautions that digitization can reduce operational frictions but raises cyber and exclusion risks for populations with limited digital

access—directly relevant to emerging-market program design. [5]

A key institutional design choice is whether retail participates in auctions and, if so, via competitive vs non-competitive orders. The OECD’s Spanish case describes direct retail access at auctions, where competitive orders are allocated subject to bid conditions and non-competitive bids can be allocated at the weighted-average accepted yield. [5] This mechanism is analytically crucial because it ties retail pricing to the wholesale yield formation process, reducing discretionary pricing risk—while still requiring thoughtful purchase limits and customer onboarding to prevent market manipulation or operational overload. [5]

Institutionally within Albania, two facts anchor the research problem:

First, the domestic investor base is concentrated. In 2025, the banking sector holds 66.07% of domestically issued debt securities (excluding central-bank-issued securities), while individuals hold 8.91%, and non-residents remain small in holdings though increasing in recent years. [3]

Second, macroeconomic incentives to shift savings instruments exist. Deposit rates are low relative to sovereign yields across the curve, implying potential retail demand if access costs and liquidity constraints are managed. [6]

2. Materials and Methods

2.1 Conceptual framework and hypotheses

We define a retail sovereign bond program as a set of instruments or issuance windows targeted at households, distributed via banks and/or an issuer platform, with explicit rules for pricing, allocations, and redemption. [5]

We formalize three testable hypotheses:

H1 (*Diversification*): Introducing retail instruments increases the share of domestic securities held by

individuals (or retail channels), partially reversing the declining retail share observed since 2018. [6]

H2 (Incentive): Retail take-up is increasing in the spread between sovereign yields and deposit rates, net of access and liquidity costs. [6]

H3 (Banking tradeoff): A non-trivial fraction of retail purchases will be funded through deposit substitution, implying a potential contractionary effect on bank funding and credit supply unless offsetting channels (wholesale funding, reserve buffers, central bank liquidity operations) absorb the shock. [5]

2.2 Equations

Bond pricing and yield-to-maturity

For a fixed-coupon bond with face value F , coupon rate c , coupon frequency m , maturity T (years), and yield-to-maturity y (annual, compounded m times), the clean price P can be expressed as:

$$P = \sum_{t=1}^{mT} \frac{cF/m}{\left(1 + \frac{y}{m}\right)^t} + \frac{F}{\left(1 + \frac{y}{m}\right)^{mT}}$$

For a zero-coupon bond:

$$P = \frac{F}{\left(1 + \frac{y}{m}\right)^{mT}}$$

These equations support two operational design tasks: (i) mapping an intended retail coupon schedule into implied yields and costs; and (ii) benchmarking retail pricing to contemporaneous market yields, including auction-derived yields. [3]

Debt dynamics and debt-to-GDP trajectory

Let b_t be debt-to-GDP at time t , r_t the effective nominal interest rate on debt, g_t nominal GDP growth, and pb_t the primary balance-to-GDP (positive for surplus). A standard debt dynamics identity is:

$$b_t = \frac{1 + r_t}{1 + g_t} b_{t-1} - pb_t + SFA_t,$$

where SFA_t denotes stock-flow adjustments (valuation effects, privatizations, arrears changes). While the debt

bulletin provides observed b_t and components (domestic/external ratios), identifying r_t and SFA_t requires additional data (interest payments, exchange-rate effects), which can be added in an extended version. [3]

Retail demand and deposit substitution

To evaluate banking tradeoffs, we model retail demand Q_t as increasing in the spread between a reference sovereign yield y_t^{gov} and deposit rate r_t^{dep} , net of friction costs k (fees, onboarding, illiquidity):

$$Q_t = \alpha + \beta(y_t^{gov} - r_t^{dep} - k) + \gamma X_t + \varepsilon_t,$$

where X_t can include inflation, income growth, and policy variables[6].

Deposit substitution is represented by a share parameter $\sigma \in [0,1]$ indicating the fraction of retail purchases financed out of bank deposits:

$$\Delta D_t = -\sigma \cdot Q_t.$$

A reduced-form credit supply response can be written as:

$$\Delta L_t = \lambda \cdot \Delta D_t,$$

where λ is an empirical pass-through depending on loan-to-deposit structure and liquidity buffers. The paper proposes scenario ranges for σ and λ when direct micro data are unavailable and recommends ex post estimation once the program launches [5].

2.3 Key assumptions and identification strategy

Because a full retail program may not yet be implemented, causal identification is not feasible ex ante. Therefore, this paper uses a two-stage approach:

1) **Descriptive + benchmarking:** establish baseline investor structure, yields, and debt risk metrics from primary-source tables and charts [3].

2) **Calibrated scenario analysis:** quantify plausible outcomes under explicit assumptions (pricing, caps, deposit substitution). These assumptions are documented and can be replaced by observed program data later.

For a future causal extension, the paper outlines a difference-in-differences design using pre/post retail issuance, comparing Albania to a synthetic control of similar economies without retail roll-out; OECD evidence suggests retail holdings often change around program introductions, motivating this design while not asserting causality in Albania without data. [33]

2.4 Data and preprocessing

This paper’s dataset design prioritizes primary/official sources and directly reproducible extraction paths.

Table 1. Data sources and dataset map

<i>Dataset (primary where possible)</i>	<i>Coverage</i>	<i>Frequency</i>	<i>Key variables used</i>	<i>What it supports</i>
Ministry of Finance debt bulletin “Buletini Statistikor i Borxhit” (example: T4 2025)	2015–2025 (varies by table)	Quarterly bulletin (tables annualized)	Debt/GDP, domestic vs external shares; investor holdings by sector; domestic debt stock and transactions; yield-curve snapshots; risk indicators	Baseline facts; trend analysis; debt and refinancing constraints; market structure
Medium-term debt management strategy 2025–2029	Policy horizon	Strategy document	Policy objective and plan to evaluate retail bonds; debt level and target path	Institutional framing; design constraints and policy intent
Central bank activity / annual reporting	2024 reporting	Annual/periodic	Domestic financing conditions; investor base developments	Cross-check for financing conditions and investor base claims
World Development Indicators / IFS as presented through World Bank DataBank	1990–2024/2025 (indicator dependent)	Annual	Deposit interest rate; inflation; GDP growth; private credit proxies	Macro controls; household incentive proxies; scenario calibration
OECD report on sovereign retail debt programs (survey-based synthesis)	Cross-country	Report	Objectives, distribution channels, auction participation patterns, operational risks	External validity; design menu; hypothesis discipline

2.5 Core variables and preprocessing notes

Investor-base variables are taken from the Ministry of Finance’s “Holders of the debt issued in the domestic market” time series. [3] These are percentages by category for government securities issued in the domestic market; the table footnote notes that securities issued for the central bank are excluded in that holder breakdown. [3] The paper therefore treats this dataset as describing the investor base relevant to market-

issued domestic securities available to the broader market.

Debt stock and GDP series are taken from the debt-to-GDP table (including domestic and external components) in the bulletin. [3] Risk indicators (refinancing risk, interest-rate refixing risk, FX share, and maturity metrics) are taken from the risk-indicators table. [3]

Yield information is proxied using the bulletin's "average yield curve by maturity" chart (annual snapshots), which provides maturity-by-maturity yields for multiple years, and is supplemented by recent auction result pages if a "most recent" view is needed. [3]

Macro proxies are used for incentive calibration: Albania's deposit interest rate, inflation, and growth series provide a consistent international-statistics backbone for cross-checking incentives and stress scenarios. [6]

3. Results and discussions

3.1 Baseline debt position and risk

The debt bulletin reports a continued multi-year decline in the debt ratio from 2022–2025: total debt stock-to-GDP moves from ~74% (2021) toward 53.04% (2025); domestic debt stock-to-GDP is 31.48% (2025) and external debt stock-to-GDP is 21.56% (2025). [3]

Debt risk indicators show improving maturity and FX exposures between 2023 and 2025: average time to maturity reaches 2.8 years, and the foreign-currency share is 40.0% in 2025. [4] However, refinancing exposure remains substantial: 39.2% of the portfolio matures within one year in 2025. [3]

A complementary structural indicator is the domestic-debt instrument mix. Domestic debt outstanding increased from 774,197.25 million ALL (end-2024) to 823,298.06 million ALL (end-2025), while Treasury-bill outstanding fell and bond outstanding rose (suggesting maturity extension in the domestic portfolio). [3]

3.2 Domestic investor-base concentration and retail share

The official "holders" table documents a persistent concentration in the banking sector. In 2025, the banking sector holds 66.07% of domestic securities, while individuals hold 8.91%; the central bank share is

7.05%, non-bank financial institutions 14.40%, non-financial institutions 2.91%, and non-residents 0.65%. The individual share has declined from 14.83% (2015) and 15.15% (2018) to 8.91% (2025). [3] This decline is the core "problem statement" for a retail program: the policy aim is to increase household participation, yet the observed trend shows the opposite over the last decade.

A second nuance is that "bank clients" (reported within the banking-sector breakdown) reach 9.22% (2025). [3] This implies that part of retail exposure is already intermediated. A retail program that routes purchases through banks may therefore expand retail holdings but could simultaneously reinforce bank-channel dependence unless a direct issuer platform is introduced.

Using domestic debt outstanding at end-2025 (823,298.06 million ALL) and the 2025 holder shares, the implied stock held by individuals is approximately:

Individuals: $0.0891 \times 823,298 \approx 73,000$ million ALL (\approx ALL 73 bn) [3]

Banking sector: $0.6607 \times 823,298 \approx 544,000$ million ALL (\approx ALL 544 bn) [3]

This magnitude illustrates why the design must consider banking-system absorption and funding substitution: a move of even a few percentage points of domestic debt stock (e.g., +5 pp retail share) corresponds to tens of billions of lek.

3.2 Interest-rate incentives and the retail "value proposition"

A basic feasibility condition for retail demand is that the expected return, net of frictions, exceeds deposit returns for a segment of households. In the World Bank/IFS series, the deposit interest rate for Albania rises to roughly 1.9% in 2024. [6]

The domestic yield curve (average yields by maturity) in the debt bulletin shows materially higher yields across maturities. For 2025, short-to-medium yields

(e.g., 12-month ~2.69%, 2-year ~2.87%, 5-year ~3.79%) exceed the deposit rate, implying a positive gross spread that can motivate retail take-up, particularly if transaction costs are low and redemption is convenient. [3]

This incentive must be interpreted alongside inflation. Inflation (consumer prices) is reported at ~2.2% (2024) in the same statistical backbone, implying that simple deposit returns may be near zero in real terms, improving the relative attractiveness of modestly higher-yielding sovereign securities. [7]

Table 2. Dataset-variable table aligned to model components

<i>Model block</i>	<i>Variable</i>	<i>Candidate measure</i>	<i>Data source</i>
Investor-base concentration	Retail share	Individuals (%) of domestic securities	Ministry debt bulletin (holders table) [3]
Investor-base concentration	Bank concentration	Banking sector (%)	Ministry debt bulletin (holders table) [3]
Debt sustainability	Debt/GDP	Total and components	Ministry debt bulletin (debt/GDP table) [3]
Refinancing risk	Maturing within one year	% of total	Ministry risk indicators
Pricing incentive	Deposit return	Deposit interest rate (%)	World Bank/IFS series via DataBank
Pricing incentive	Sovereign yields	Yield curve by maturity	Ministry yield curve
Macro stress control	Inflation	CPI inflation (%)	World Bank/IFS via DataBank
Macro stress control	Growth	GDP growth (%)	WDI via DataBank

Table 3. Model-choice comparison

<i>Approach</i>	<i>What it answers well</i>	<i>What it cannot answer ex ante</i>	<i>Data needs</i>	<i>Recommended use</i>
Descriptive benchmarking	Baseline investor structure, yields, risks	Causal effects	Debt bulletin tables/charts	Mandatory first stage [3]
Calibrated scenario model	“What if” deposit substitution & cost outcomes	True elasticities without microdata	Deposit/credit aggregates + pricing + program rules	Best ex ante tool; document assumptions [5]
Reduced-form econometrics (time series)	Empirical link between spreads and holdings	Hard identification; small samples	Higher-frequency holdings + yields + deposits	Use after launch with monthly/weekly data [5]
Program evaluation (DiD / synthetic control)	Credible causal effects of launch	Requires post-launch period	Comparable countries + consistent outcomes	Best ex post design [5]

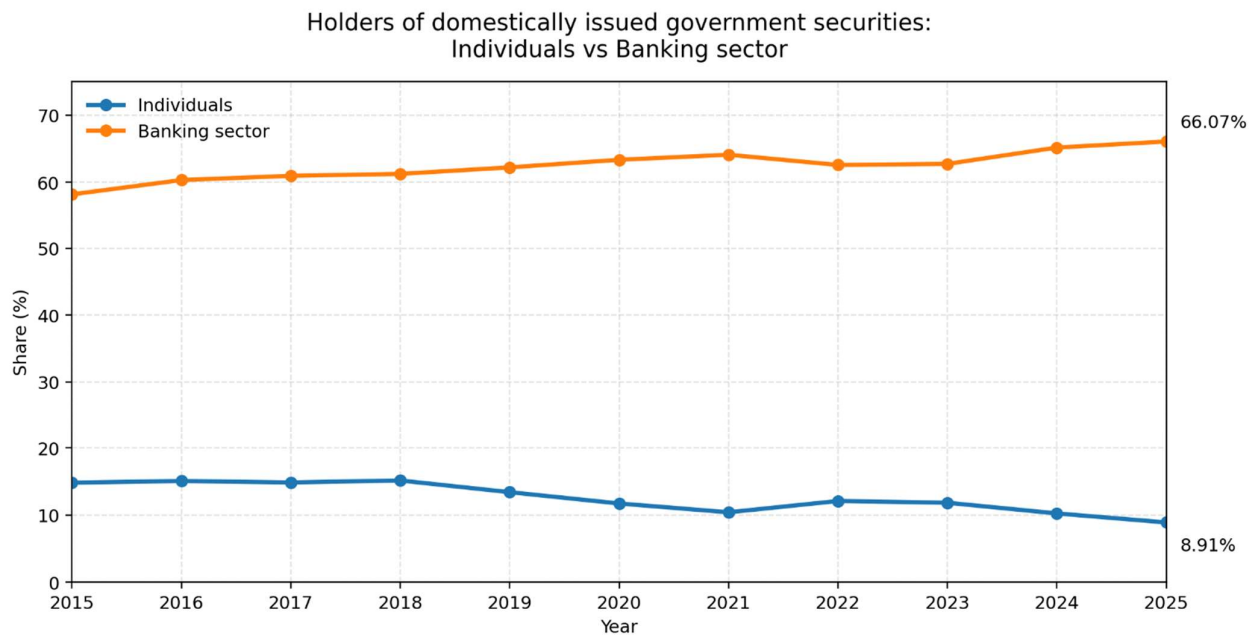


Figure 1. Time series sketch: retail share versus bank share in domestic debt (Data source: Ministry of Finance debt bulletin holder table).

Retail bond program evaluation lifecycle

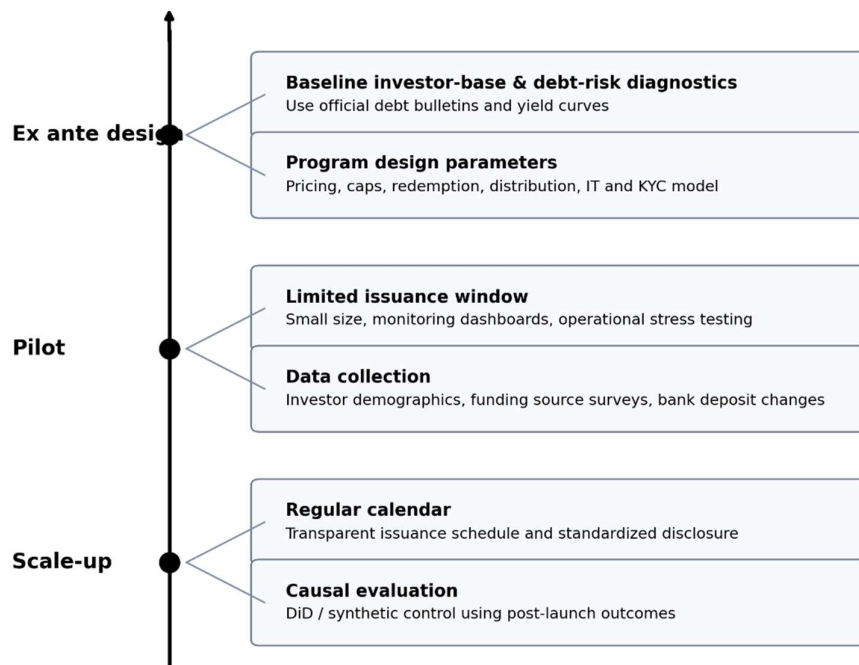


Figure 2. Research-to-implementation evaluation path

4. Discussions

The data-driven transformation of the article yields three main insights.

First, the problem is measurable: individuals’ direct holdings share (as reported in the debt bulletin) is smaller and trending downward. [3] A retail bond policy therefore should not be framed as “starting from

zero,” but as “reversing a decline and changing the channel mix”—especially given the growing “bank clients” subshare inside the banking sector. [3]

Second, incentives exist but require careful design. Deposit rates remain low relative to sovereign yields; even at the short end, the yield curve implies a meaningful spread that could attract retail demand, particularly if households seek inflation-hedging or slightly higher nominal returns. [6] But OECD evidence warns that the operational choices—distribution channel, issuance window versus continuous availability, redemption and purchase limits, and digitization tradeoffs—materially affect who participates and at what cost. [5]

Third, the banking-system tradeoff must be evaluated, not assumed. The OECD Spanish case illustrates that retail access can be structured as auction-based with non-competitive allocations, which can improve accessibility and reduce intermediation fees but still competes with deposits when rates rise. [10] For Albania, where domestic debt is largely held in the banking sector, the marginal source of retail funding (deposits vs other savings) determines whether the retail program is primarily an investor-base diversification tool or a broader financial-intermediation reallocation with possible credit consequences. [3]

5. Conclusion

Official statistics show (i) debt ratios declining but refinancing exposure still material; (ii) a domestic investor base dominated by banks; and (iii) a decreasing direct individual share in domestic securities from ~15% to ~9% by 2025. [46] In parallel, deposit rates are low relative to sovereign yields, creating an incentive-compatible margin for retail demand if access and liquidity are addressed. [6]

The methodology provided here—primary-source benchmarking plus calibrated scenario analysis—

creates a rigorous, reproducible baseline. It also defines the data that must be collected during any pilot (investor onboarding, funding source surveys, deposit flows, redemption patterns) to enable credible causal evaluation as the program scales. [5]

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