

## Synopsis of the Master Thesis

# War Intensity and Currency Market Responses: Evidence from Daily Air Alerts and Foreign Exchange Behavior in Ukraine

*Theme: "Sovereignty and Dependence: a time for choices"*

**Kateryna Zaichenko**

December 9, 2025

---

### Context and Objective: The Choice Between Survival and Safety

The 2022 full-scale invasion of Ukraine created an unprecedented natural experiment in financial behavior under existential stress. This thesis investigates how real-time war intensity drives foreign exchange (FX) market dynamics. In a war zone, economic agents face a critical choice: rely on the domestic currency for immediate survival (liquidity) or flee to foreign currency for long-term preservation (dependence). This study quantifies this tension by analyzing the relationship between physical danger - measured by daily air-raid alerts - and household financial decisions.

### Methodological Innovation: Measuring War without Words

Standard Geopolitical Risk (GPR) models rely on monthly, text-based news indices. This thesis overcomes the limitations of such low-frequency data by constructing a **novel, daily, non-textual index of war intensity** based on the official duration of air-raid alerts (66 hours/day average nationwide). This granular approach allows for the isolation of immediate behavioral responses to physical threats. The analysis employs a dual-level econometric strategy:

- 1. National Level:** A distributed-lag time-series model (HAC-corrected) analyses official NBU transaction data to determine how alert intensity impacts net FX sales, controlling for the policy exerted by the central bank (capital controls and fixed exchange rates).
- 2. Regional Level:** A Two-Way Fixed Effects (TWFE) panel model utilizes Google Trends data across 24 oblasts (regions) to measure the "flight-to-safety" attention, isolating localized threat responses from nationwide shocks.

**Key Findings: The Liquidity-Precautionary Paradox** The results reveal a complex duality in wartime financial behavior:

- **The Liquidity Effect (National Actions):** Contrary to the "panic buying" hypothesis, heightened war intensity leads households to become net *sellers* of foreign currency. The model identifies a statistically significant liquidity effect: under acute threat, households liquidate "safe" foreign assets to cover immediate local-currency expenses (emergency repairs, relocation, supplies).
- **The Precautionary Motive (Regional Attention):** Conversely, the regional analysis confirms a strong psychological desire for dependence on foreign currency. Regions with higher alert duration show a sharp increase in search interest for "buy dollar."
- **Demographic Divergence:** A striking linguistic divergence was found. While Ukrainian-language searches correlate positively with danger (precautionary motive), Russian-language

searches correlate negatively. This effectively proxies for war-induced population displacement and the severing of occupied territories from Ukraine's financial sovereignty.

### **Contribution and Implications for the Financial Profession**

This thesis contributes to the fields of conflict economics and behavioral finance by demonstrating that physical danger generates two opposing financial pressures simultaneously: a *desire* to buy foreign currency (dependence) and a *need* to sell it (liquidity). For central bankers and policymakers, the implications are critical. Maintaining **monetary sovereignty** during conflict requires more than just capital controls; it requires mechanisms to provide local currency liquidity to a population under fire. If the central bank fails to address the liquidity needs of the "survival" choice, the population's dependence on foreign currency will eventually overwhelm the financial system. The use of air-alert data provides a new high-frequency tool for nowcasting economic stress in conflict zones, offering a blueprint for resilience in future geopolitical crises.