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Heterogeneous Effects Of Inflation, Inflation Targeting, And Climate Commitments On Financial Development

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Abstract– *This study explores the heterogeneous effects of inflation, inflation uncertainty, inflation targeting, and climate policy commitments on financial development across 81 countries from 2007 to 2021. Using a quantile regression framework, we examine how these macroeconomic factors influence financial development at different points in the distribution. The results reveal that inflation and inflation uncertainty have increasingly negative effects on financial development in more financially advanced economies. In contrast, inflation targeting is positively associated with financial development across all quantiles, with the strongest impact observed at the median. Furthermore, the moderating role of the Paris Agreement emerges as significant, particularly in reducing the adverse effects of inflation in countries with stronger institutional depth. Robustness checks using alternative proxies—Financial Institutions Index (FII) and Financial Markets Index (FM)—confirm the stability of the main findings. This study highlights the importance of distribution-sensitive policy design and underscores the complementary roles of monetary credibility and climate commitments in promoting resilient financial systems.*

Keywords: *Inflation uncertainty, Financial depth, Inflation targeting, Climate policy commitments, Quantile regression.*

I. INTRODUCTION

Twin forces of inflation and inflation uncertainty have shaped the current landscape of global finance. These major economic variables determine the stability and growth of the financial market. In recent years, particularly in 2022, U.S. monetary policy took a dramatic shift in direction. During that period, the Federal Reserve tried to fight inflation with a series of interest rate increases, a sharp divergence from the low-interest-rate environment since the financial crisis in 2008. These rate increases have significantly impacted financial development. Higher interest rates can impact borrowing costs, investment decisions, and, generally, economic activity. However, the relationship between inflation, uncertainty in inflation, and financial development is complex and multifaceted. The fact that a moderate dose of inflation could stimulate financial development through spending and investments, high inflation and uncertainties associated with these two factors will only serve to destroy confidence, raise risks, and discourage long-term investments.The development and resilience of financial systems are fundamental pillars for achieving sustainable economic growth, particularly under the dual pressures of macroeconomic volatility and climate transition risks. Among the key macroeconomic drivers, inflation dynamics — comprising inflation levels, inflation uncertainty, and the adoption of inflation targeting regimes — play critical roles in shaping financial sector outcomes. Prior research has established that high inflation and inflation volatility erode financial intermediation by increasing transaction costs, shortening investment horizons, and discouraging long-term financial contracting [1][2]. Conversely, inflation targeting frameworks are designed to stabilise expectations, reduce uncertainty, and provide an environment conducive to deeper and more efficient financial markets [3]. However, critical gaps remain. First, the global commitment to climate action, crystallised in the 2015 Paris Agreement, introduces structural transformations in production, consumption, and regulation. These shifts, often termed "green transition risks," may impact the inflation process itself, contributing to new supply shocks and energy-related price pressures ("greenflation"). Consequently, the relationship between inflation and financial depth may be fundamentally altered in the post-Paris era. Second, while inflation targeting frameworks aim to stabilise macroeconomic environments, it is unclear whether they effectively shield financial systems from the

destabilising effects of heightened inflation uncertainty during periods of structural transition. Thus, this study is motivated by four interrelated considerations: (1) Understanding Direct Effects: Analysing how inflation, inflation uncertainty, and inflation targeting influence financial depth across countries. (2) Capturing Distributional Heterogeneity: Employing quantile regression inference to investigate whether these effects vary across different levels of financial sector development. (3) Exploring Monetary Moderation: Testing whether inflation targeting moderates the adverse effects of inflation uncertainty on financial depth through an interaction term. (4) Assessing Climate Policy Intersection: Introducing an interaction term between the Paris Agreement commitment and inflation to examine whether climate commitments reshape the traditional inflation–financial depth nexus. By modelling financial depth as a function of inflation, inflation uncertainty, inflation targeting, Paris Agreement adoption, and their key interaction effects, this study provides a comprehensive empirical framework to uncover nonlinearities, asymmetries, and regime shifts. This paper investigates how inflation and inflation uncertainty affect financial development in a global context, using data ranging from 2007 to 2021. Further, this research uses the Paris Agreement and inflation targeting as dummy variables to test their impacts on financial development. The Paris Agreement, initiated in 2015, was an international agreement based on an undertaking of all countries across the world to take comprehensive and effective actions toward climate change. Inflation targeting is a monetary policy approach that views the stabilisation of both prices and the economy as a mission of pursuing explicit inflation targets. This paper attempts to contribute to this nuanced understanding of what drives financial development in a rapidly changing world through an investigation of the interrelationship between these economic and environmental variables. This will add to the existing literature as a much-needed, in-depth, empirical analysis of how macroeconomic policies and international agreements interact in setting financial markets. We expect the outcome to highlight the possible implications of inflation dynamics and global environmental commitments for policymakers, investors, and other stakeholders concerning economic stability and growth.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Among various studies conducted on inflation, inflation uncertainty, and financial development, some key studies can elaborate on the work behind this interaction of variables. Generally, high inflation has hurt financial development. According to [4] and [5], it causes distortion and inefficient allocation, deters long-term investment, and reduces real returns on financial assets. These conditions could finally cause financial institutions to contract their lending activities, as they perceive increased risks in such volatile environments.

A. Inflation, Inflation Uncertainty, and Financial Depth

The relationship between inflation dynamics and financial sector development has long been a central theme in macro-finance research. High inflation is widely recognised to erode the real value of financial assets, discourage long-term savings, raise transaction costs, and undermine the incentives for financial intermediation (Boyd, Levine, and Smith, 2001). These adverse effects inhibit the process of financial deepening, particularly in economies where institutional frameworks are less robust and more vulnerable to macroeconomic shocks. Beyond the level of inflation, the uncertainty surrounding future inflation outcomes presents an additional layer of risk that further complicates investment and financing decisions. Lombardi and [6] illustrate that heightened inflation uncertainty discourages investment activity and restrains economic growth, particularly in emerging markets characterised by relatively fragile financial structures. [7] similarly argue that uncertainty leads to more cautious lending behaviour, higher risk premiums, and diminished credit market development, ultimately slowing financial deepening. Empirical studies such as [8] and [9] further confirm that inflation uncertainty exerts a significantly negative influence on financial market development. Although the emergence of inflation targeting frameworks has enhanced the flexibility of monetary policy and incorporated financial stability considerations alongside traditional price stabilization goals [10], [11], the effectiveness of these frameworks may still be moderated by the underlying economic structure and institutional strength of individual countries. Consequently, it remains essential to distinguish between the distinct impacts of inflation levels and inflation uncertainty on financial sector development. Thus, we hypothesize:

H1: Inflation negatively affects financial depth.

H2: Inflation uncertainty negatively affects financial depth.

B. 2.2 Inflation Targeting and Financial Development

Inflation targeting (IT) has emerged as a widely adopted monetary policy framework aimed at anchoring inflation expectations, stabilising macroeconomic conditions, and supporting financial development. Early analytical models, such as those developed by [12], highlight that IT policies contribute significantly to stabilising output, managing inflation expectations, and influencing asset price movements in small open economies. [13] further emphasises that the success of IT frameworks depends critically on macroeconomic cyclicality and the credibility of policymaking institutions. The implications of IT for the financial sector have also garnered increasing attention. [14] and [15] show that while IT frameworks are effective in reducing inflation uncertainty and fostering price stability, they may simultaneously introduce new types of financial risks. Moreover, [9] and [15] stress that the effectiveness of IT is conditioned by the structure and volatility of financial markets, particularly in emerging economies, where institutional weaknesses and shallow markets may complicate monetary transmission. Emerging economies face additional challenges in adopting IT regimes due to factors such as lower levels of financial integration and economic development [16], [17]. In regional contexts such as ECOWAS and SADC, [8] found that the stability of inflation through IT is essential for enabling the expansion of the financial sector. Overall, although much of the literature focuses on the role of IT in stabilising inflation and enhancing monetary policy credibility, its broader implications for financial depth, particularly in economies characterised by heightened inflation volatility and structural transformation, remain underexplored. By providing a credible commitment to low and stable inflation, IT frameworks can reduce macroeconomic uncertainty and encourage long-term investment, savings, and financial intermediation [3], [18], [10], [16]. Accordingly, we hypothesise:

H3: Inflation targeting positively affects financial depth.

C. 2.3 Moderating Role of Inflation Targeting on Inflation Uncertainty

Although the relationship between inflation levels and financial development has been extensively studied, the effects of inflation uncertainty on financial deepening remain relatively underexplored. Inflation uncertainty — the unpredictability of future inflation paths — can deter investment, hinder credit market development, and ultimately restrict financial sector growth. As [6] argue, heightened inflation uncertainty discourages investment and credit expansion, particularly in emerging economies where financial markets are more vulnerable to macroeconomic volatility. Despite its importance, empirical evidence on how inflation uncertainty affects financial development across different economic and institutional contexts remains limited. Meanwhile, inflation targeting has become a widely adopted monetary policy framework aimed at stabilizing inflation expectations and reducing macroeconomic volatility [10], [8].While prior studies have confirmed the positive role of inflation targeting in anchoring expectations and promoting financial market stability, its capacity to moderate the adverse effects of inflation uncertainty on financial depth has not been fully examined. The effectiveness of inflation targeting may vary depending on the strength of financial institutions, monetary credibility, and the degree of market development, factors that influence its ability to shield financial systems from uncertainty-induced disruptions. A credible inflation-targeting regime enhances predictability about future inflation trends, even amid external shocks, thereby supporting financial market participation and credit allocation. By mitigating risk premiums associated with inflation volatility, inflation targeting can insulate financial systems from the destabilising effects of inflation uncertainty [19]. Accordingly, we hypothesise:

H4: Inflation targeting moderates the relationship between inflation uncertainty and financial depth, such that the negative effect of inflation uncertainty is weaker in countries that have adopted inflation targeting regimes.

D. 2.4 Moderating Role of the Paris Agreement on the Inflation–Financial Depth Relationship

Environmental policies can introduce additional compliance costs for financial institutions while simultaneously redirecting investment patterns toward sustainable assets [20]. Although these dynamics have been increasingly recognised, empirical research examining the long-term financial impacts of global climate commitments, particularly the Paris Agreement (PA), remains limited. Specifically, little is known about how regulatory commitments to sustainability affect the depth and development of financial

markets and reshape the broader institutional environment. Prior studies have demonstrated that environmental policy can in the short term cause financial market disruptions and heighten compliance expenses, but in the long term, it can stimulate sustainable development [8].Moreover, while previous studies have independently explored the effects of macroeconomic factors — such as inflation and inflation uncertainty — and policy interventions — such as inflation targeting and environmental regulations — their combined influence on financial development has not been systematically analysed. Understanding how climate policy commitments interact with traditional macroeconomic drivers is crucial for assessing the evolving nature of financial sector resilience. The adoption of the Paris Agreement in 2015 marked a significant global policy shift toward decarbonisation, leading to structural transformations across economies. Climate transition policies, including carbon pricing, green subsidies, and stricter environmental regulations, can generate supply-side shocks and introduce "greenflation" pressures, influencing inflation dynamics and altering investment behaviours (OECD, 2021). These developments suggest that the relationship between inflation and financial depth may no longer be static; instead, it may be conditioned by the presence of climate commitments. In light of these considerations, we hypothesise:

H5: The Paris Agreement moderates the relationship between inflation and financial depth, such that the effect of inflation on financial depth changes after the adoption of climate commitments.

E. 2.5 Heterogeneous Effects Across the Distribution of Financial Depth

The motivation for applying quantile regression in this study arises from two important considerations. First, the quantile regression estimator is notably robust to outliers in the dependent variable, making it particularly suitable in contexts where distributions exhibit heavy tails. Given that the distribution of macroeconomic variables such as inflation and financial depth often displays skewness and fat tails [21], traditional mean regression methods may yield biased or inefficient estimates. Quantile regression provides a more reliable characterisation of the conditional distribution of financial depth across different points, rather than focusing solely on the mean. Second, quantile regression allows for the assessment of how macroeconomic and policy variables — such as inflation, inflation uncertainty, inflation targeting, and the Paris Agreement — affect countries differently depending on their position along the financial depth distribution. Rather than assuming homogeneous effects, quantile regression captures heterogeneity across countries, offering insights into whether the influence of inflation dynamics is stronger for countries with shallower or deeper financial systems.Prior findings suggest that the magnitude and even the direction of policy impacts may vary across quantiles, with stronger adverse effects observed in upper quantiles where inflation or uncertainty pressures are more pronounced. Given the possibility that the impact of inflation, inflation uncertainty, and policy interventions may vary systematically across different levels of financial development, it is unlikely that simple data differences alone could explain the observed variations.Thus, to uncover the full range of effects across the financial depth distribution, we propose the following hypothesis:

H6: The effects of inflation, inflation uncertainty, inflation targeting, and the Paris Agreement on financial depth vary across the distribution of financial depth.

III. DATA AND METHODOLOGY

A. 3.1 Data Sources and definition of variables

This study draws on panel data covering 81 countries over the period 2007 to 2021, sourced primarily from the World Bank Group. The key variables include the Financial Development Index (FD), the Financial Institution Depth Index (FII), the Financial Market Index (FM), and the Consumer Price Index (CPI). These indicators collectively capture the macro-financial conditions across countries and over time. The Financial Institutions Depth Index (FII) reflects the size and activity level of financial institutions within an economy. Financial institutions—such as banks, credit unions, and insurance companies—facilitate the allocation of funds from savers to borrowers. The FII component includes metrics such as total assets, domestic credit to the private sector, and total deposits, each expressed as a percentage of Gross Domestic Product (GDP). The Financial Market Index (FM) evaluates the functionality and scale of financial markets, which serve as platforms for the exchange of financial assets, including equity and debt instruments. Key indicators include stock market capitalisation and the total value of stocks traded, both relative to GDP. Together, FII and FM contribute to the construction of the composite Financial

Development Index (FD). Inflation dynamics are represented by the Consumer Price Index (CPI), which measures the average change in prices paid by consumers for goods and services, and is used as a proxy for both inflation level and variability. To account for relevant policy interventions, the analysis incorporates two binary (dummy) variables: (1) Inflation Targeting (IT): This variable indicates whether a country has formally adopted an inflation-targeting regime. Based on classifications by [22] and [23], countries that implement inflation targeting are coded as 1, and those that do not are coded as 0. (2) Paris Agreement (PA): This variable captures a country's commitment to climate policy following the adoption of the Paris Agreement in 2015. It is coded as 0 for years before 2015 and 1 for 2015 and thereafter. Together, these variables provide the foundation for analysing how macroeconomic conditions and policy frameworks interact to influence financial development across a diverse set of countries and over a fifteen-year period.

Table I presents the summary statistics for the key variables used in this study, including the mean, median, standard deviation, minimum, maximum, and number of observations. These statistics provide a comprehensive overview of the distributional properties and variability of the dataset across countries and time. The Financial Development Index (FD) has a mean of 0.3591 and a median of 0.3124, indicating that most countries in the sample exhibit low to moderate levels of financial development. The maximum value of 1.0000 reflects the presence of economies with highly advanced financial systems, while the dispersion suggests substantial heterogeneity across the sample. Similarly, the Financial Institution Depth (FID) index records a mean value of 0.3064, further supporting the view that institutional financial development varies significantly across countries. This measure captures depth-related aspects of the financial sector, such as credit to the private sector and market size, and indicates a relatively balanced distribution in institutional financial structures.In contrast, the Consumer Price Index (CPI) displays considerable variation. The mean value is 13.273, whereas the median is substantially lower at 3.611, indicating a right-skewed distribution. The exceptionally high maximum value of 2947.733 suggests episodes of hyperinflation in a few countries, which heavily influence the mean. The minimum value of –4.478 may reflect deflationary episodes or potential data anomalies in select cases. Inflation uncertainty, measured by the Inflation Uncertainty Standard (PIS), also exhibits substantial dispersion. The mean is 2.957 and the median is 1.250, while the standard deviation is 10.92 — highlighting a wide range of inflation volatility across the sample. The maximum value of 182.58 indicates extremely unstable inflation environments in some economies, whereas the minimum value of 0 reflects either price stability or negligible uncertainty in others.Regarding policy variables, the binary indicator for Inflation Targeting (IT) has a mean of 0.1436, suggesting that approximately 14.36% of the observations pertain to countries operating under inflation-targeting regimes. This indicates that while inflation targeting is adopted in some economies, it remains relatively limited in global coverage. The Paris Agreement (PA) indicator shows a mean of 0.2639, implying that around 26.39% of the sample reflects countries actively engaged in implementing climate commitments under the Agreement. This points to regional variation in the adoption and implementation of international environmental policy. Overall, the descriptive statistics underscore pronounced heterogeneity in financial development, inflation dynamics, and policy adoption across countries. These differences provide a critical foundation for examining how macroeconomic conditions and policy frameworks interact to influence financial development outcomes, which will be explored in the subsequent empirical analysis.

Table I
Descriptive Statistics

	SD	Min	Mean	Max	p10	p25	p50	p75	p90
FD	0.228	0.041	0.343	0.963	0.100	0.161	0.280	0.486	0.712
FII	0.213	0.081	0.444	0.993	0.184	0.263	0.420	0.588	0.754
FM	0.265	0.000	0.228	0.909	0.000	0.008	0.098	0.384	0.680
PI	2.337	-9.210	0.064	5.017	-3.025	-0.907	0.783	1.582	2.205
PIS	11.591	0.000	2.749	182.576	0.422	0.684	1.107	1.820	3.685
IT	0.349	0.000	0.142	1.000	0.000	0.000	0.000	0.000	1.000
PA	0.434	0.000	0.748	1.000	0.000	0.000	1.000	1.000	1.000

PIPA	2.166	-9.210	-0.173	5.017	-2.949	-0.336	0.000	1.212	1.885
OBS.	648								

Note: The variables include the Financial Development Index (FD), Financial Institution Depth Index (FII), Financial Market Index (FM), Inflation variables (PI), and the standard deviation of inflation (PIS). FD is a composite index capturing the overall level of financial development. FII and FM represent the depth of financial institutions and financial markets, respectively. PI measures the annual percentage change in consumer prices, while PIS reflects the inflation uncertainty over time. Inflation Targeting (IT) and Paris Agreement (PA) are binary variables indicating the presence of formal inflation targeting frameworks and post-2015 climate policy commitments, respectively.

Table II presents the pairwise correlation matrix among the key variables used in the study. The correlation coefficients are accompanied by their corresponding p-values (in parentheses), indicating the statistical significance of each association. The Financial Development Index (FD) is highly positively correlated with both the Financial Institutions Index (FII) ($r = 0.921$, $p < 0.01$) and the Financial Market Index (FM) ($r = 0.949$, $p < 0.01$), suggesting a strong complementary relationship among these components of financial development. This reinforces the composite nature of the FD index as being driven by institutional depth and market development. The policy variable Inflation Targeting (IT) is significantly and positively associated with FD ($r = 0.499$), FII ($r = 0.425$), and FM ($r = 0.502$), all at the 1% significance level. This indicates that countries with formal inflation targeting frameworks tend to exhibit higher levels of financial development across both institutional and market dimensions. In contrast, inflation (PI) and inflation uncertainty (PIS) are negatively associated with financial development. Specifically, PI is negatively correlated with FD ($r = –0.214$), FII ($r = –0.259$), and FM ($r = –0.153$), all significant at the 1% level, supporting the hypothesis that high inflation undermines financial sector development. PIS also exhibits statistically significant negative correlations with FD ($r = –0.141$), FII ($r = –0.156$), and FM ($r = –0.113$), further confirming the destabilising effect of inflation volatility on financial systems. The interaction term PIPA (PI × PA), which captures the interplay between inflation and climate policy (Paris Agreement), is negatively correlated with FD ($r = –0.174$), FII ($r = –0.212$), and FM ($r = –0.123$), again with high statistical significance ($p < 0.01$). This may suggest that inflationary pressures could weaken financial development even in countries committed to climate transition frameworks. Lastly, PA (Paris Agreement) itself shows very weak correlations with most variables, and its correlation with inflation ($r = –0.218$) is significant but modest. This suggests that participation in climate policy alone may not strongly co-move with traditional macro-financial indicators, reinforcing the need for interaction-based empirical analysis. Overall, the correlation matrix reveals expected relationships: inflation and its uncertainty tend to hinder financial development, while inflation targeting appears conducive to financial sector strength. The relatively low correlations between some variables (e.g., PA and FD) also suggest minimal multicollinearity, supporting their inclusion in the multivariate regression models.

Table II
Pairwise Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) FD	1.00								
(2) FII	0.921*	1.00							
	(0.00)								
(3) FM	0.949*	0.751*	1.00						
	(0.00)	(0.00)							
(4) PIS	-0.141*	-0.156*	-0.113*	1.00					
	(0.00)	(0.00)	(0.00)						
(5) IT	0.499*	0.425*	0.502*	-0.065	1.00				
	(0.00)	(0.00)	(0.00)	(0.10)					
(6) PISIT	0.389*	0.321*	0.399*	-0.048	0.866*	1.00			
	(0.00)	(0.00)	(0.00)	(0.22)	(0.00)				
(7) PI	-0.214*	-0.259*	-0.153*	0.169*	-0.030	0.035	1.00		

	(0.00)	(0.00)	(0.00)	(0.00)	(0.45)	(0.37)			
(8) PA	0.017	0.032	0.002	0.030	0.001	0.005	-0.218*	1.00	
	(0.67)	(0.42)	(0.95)	(0.45)	(0.97)	(0.90)	(0.00)		
(9) PIPA	-0.174*	-0.212*	-0.123*	0.180*	-0.016	0.049	0.935*	-0.046	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.69)	(0.21)	(0.00)	(0.24)	

Note: This table reports the pairwise Pearson correlation coefficients among the study variables. Significance levels are indicated by asterisks for $p < 0.05$. The correlations highlight key associations among financial development, inflation dynamics, and policy variables, and support the justification for the multivariate and interaction-based regression models used in this study.

B. 3.2 Model Specification

In this study, the baseline panel regression model is specified as follows:

$$Y_{it} = \beta_0 + \beta_1 PIS_{it} + \beta_2 IT_{it} + \beta_3 PI_{it} + \beta_4 PA_{it} + \gamma X'_{it} + \mu_i + \lambda_t + \epsilon_{it} \quad (1)$$

Where:

- $Y_{i,t}$ is the financial depth (FD), both Financial Institution Depth (FII) and Financial Market (FM).
- $PI_{i,t}$ and $PIS_{i,t}$ represents the independent macroeconomic variables, which include inflation (PI), standard deviation of inflation(PIS)
- $PA_{i,t}$ is a dummy variable for the Paris Agreement period (1 if year ≥ 2015, 0 otherwise)
- μ_i means country fixed effects.
- λ_t means year fixed effects.
- $\epsilon_{i,t}$ representing the error term (residual). It captures all the factors that affect financial depth (FD, FID, FM), but is not explicitly included in the model.

Additionally, this study incorporates two interaction effects to analyse their impact on financial depth further:

$$Y_{it} = \beta_0 + \beta_1 PIS_{it} + \beta_2 IT_{it} + \beta_3 PI_{it} + \beta_4 (PIS_{it} \times IT_{it}) + \beta_5 PA_{it} + \beta_6 (PI_{it} \times PA_{it}) + \gamma X'_{it} + \mu_i + \lambda_t + \epsilon_{it} \quad (2)$$

Where:

- $(PIS_{it} \times IT_{it})$ means interaction term for testing the moderating effect of inflation target.
- $(PI_{it} \times PA_{it})$ means interaction term for testing the moderating effect of the Paris agreement event.

C. 3.3 Quantile Regression Model

To capture the heterogeneous effects of macroeconomic and policy variables on financial depth, we employ quantile regression, which estimates the conditional quantiles of the dependent variable, rather than its conditional mean. This approach is particularly valuable when the effects of covariates vary across the distribution of the outcome variable - in our case, financial depth - and when the data may exhibit non-normal errors or outliers.

Let FD_{it} denote the financial depth of country i, and X_{it} be a vector of explanatory variables, including inflation (PI), inflation uncertainty (PIS), inflation targeting (IT), the Paris Agreement dummy (PA), and relevant interaction terms. The τ-th conditional quantile of FD_{it}, given X_{it}, is defined as:

$$Quantile_\tau(FD_{it}|X_{it}) = X_{it}^T \beta_\tau \quad (3)$$

Where β_τ is the parameter vector specific to quantile $\tau \in (0,1)$, and $Q_\tau(\cdot)$ denotes the τ-th quantile function. The quantile regression estimator $\hat{\beta}_\tau$ solves the minimization problem:

$$\min_\beta \sum_{i=1}^{n} \rho_\tau (FD_{it} - X_{it}^T \beta_\tau) \quad (4)$$

Where $\rho_\tau(u) = u(\tau - \mathbb{I}[u < 0])$ is the check function [24], [25], [26], [27]. This loss function penalises over- and under-predictions asymmetrically depending on the quantile, allowing us to trace how the marginal impact of predictors varies at different points of the financial depth distribution. In our application, we estimate the following quantile regression model for selected quantiles $\tau \in (0.1, 0.25, 0.50, 0.75, 0.90)$:

$$\text{Quantile}_{\tau}(\text{FD}_{it}|X_{it}) = \beta_{0\tau} + \beta_{1\tau}\text{PIS}_{it} + \beta_{2\tau}\text{IT}_{it} + \beta_{3\tau}\text{PI}_{it} + \beta_{4\tau}(\text{PIS}_{it} \times \text{IT}_{it}) + \beta_{5\tau}\text{PA}_{it} + \beta_{6\tau}(\text{PI}_{it} \times \text{PA}_{it}) + \gamma_{\tau}X'_{it} + \mu_{i\tau} + \lambda_{t\tau} + \epsilon_{it} \quad (5)$$

IV. EMPIRICAL RESULTS AND ANALYSIS

A. 4.1 Preliminary Results

The baseline regression model examines the impact of inflation dynamics and policy interventions on financial development using panel data from81 countries over the period 2007–2021. The dependent variables are the Financial Development Index (FD), the Financial Institution Index (FII), and the Financial Market Index (FM), estimated separately across three model specifications. Key explanatory variables include inflation (PI), inflation uncertainty (PIS, proxied by standard deviation), inflation targeting (IT), Paris Agreement commitment (PA), and the interaction term between inflation and the Paris Agreement (PIPA). Robust standard errors and country-level fixed effects are used to control for unobserved heterogeneity. The baseline regression model examines the impact of inflation dynamics and policy interventions on financial development using panel data from81 countries over the period 2007–2021. The dependent variables are the Financial Development Index (FD), the Financial Institution Index (FII), and the Financial Market Index (FM), estimated separately across three model specifications. Key explanatory variables include inflation (PI), inflation uncertainty (PIS, proxied by standard deviation), inflation targeting (IT), Paris Agreement commitment (PA), and the interaction term between inflation and the Paris Agreement (PIPA). Robust standard errors and country-level fixed effects are used to control for unobserved heterogeneity.

Table III presents the OLS regression results for the three dimensions of financial development. Consistently across all three models, PIS exhibits a statistically significant negative effect on financial development, with coefficients ranging from –0.00138 to –0.00170. This finding supports H2, indicating that inflation uncertainty hinders financial deepening, likely by increasing risk premiums and reducing credit activity, particularly in countries with less monetary policy credibility. The coefficient on IT is positive and highly significant in all models ($p < 0.01$), with values between 0.321 and 0.444. This provides strong support for H3, suggesting that inflation targeting regimes are associated with deeper financial systems, likely due to enhanced policy credibility and reduced macroeconomic volatility. The negative and marginally significant coefficient on PISIT in two out of the three specifications suggests a weak inverse relationship between inflation volatility and financial development, consistent with expectations but less robust than the PIS effect. Inflation has a strong and consistently negative impact across all models ($p < 0.01$), with coefficients between –0.0358 and –0.0475. This affirms H1, reinforcing the classical view that higher inflation reduces the real value of financial assets, discourages long-term investment, and weakens financial sector growth.

Table III
Preliminary Results

	(1)	(2)	(3)
VARIABLES	FD	FII	FM
PIS	-0.00157**	-0.00170***	-0.00138*
	(2.378)	(2.680)	(1.765)
IT	0.390***	0.321***	0.444***
	(9.007)	(7.699)	(8.687)
PIS×IT	-0.0805*	-0.0789**	-0.0790
	(1.947)	(1.981)	(1.619)
PI	-0.0425***	-0.0475***	-0.0358***
	(4.083)	(4.739)	(2.919)
PA	-0.0337*	-0.0318*	-0.0342
	(1.691)	(1.660)	(1.457)
PI×PA	0.0274**	0.0299***	0.0239*
	(2.501)	(2.828)	(1.850)
Constant	0.335***	0.445***	0.211***

	(18.31)	(25.28)	(9.798)
Observations	648	648	648
R-squared	0.306	0.263	0.281

Note: This table presents the results of ordinary least squares (OLS) regressions evaluating the effects of inflation, inflation uncertainty, and policy variables on financial development. The dependent variables include the Financial Development Index (FD), the Financial Institutions Index (FII), and the Financial Markets Index (FM). Robust t-statistics are reported in parentheses. Statistical significance is denoted by $p < 0.01$, $p < 0.05$, and $p < 0.10$. The main effect of PA is negative and marginally significant in the FD and FII models, but not in FM. While this suggests a weak adverse effect of climate policy commitment on financial development, it is likely that the impact is conditional, rather than direct. Interestingly, the interaction term between inflation and the Paris Agreement (PIPA) is positive and significant across all models, supporting H5. This suggests that in countries adopting the Paris Agreement, the negative effect of inflation on financial development is partially offset. This may reflect that climate policy commitments bring about regulatory reforms, external funding flows, or green finance initiatives that mitigate inflation-related risks. Overall, the R-squared values range from 0.263 to 0.306, indicating that the model explains a moderate share of variation in financial development. These preliminary findings highlight the importance of considering both macroeconomic volatility and policy regimes when assessing the drivers of financial sector growth.

B. 4.2 Quantile regression results

To assess the heterogeneous effects of macroeconomic variables and policy interventions across different levels of financial development, we estimate quantile regressions at the 10th, 25th, 50th, 75th, and 90th percentiles of the Financial Development Index (FD). This approach allows us to observe how the marginal effects of inflation (PI), inflation uncertainty (PIS), inflation targeting (IT), and the Paris Agreement (PA) vary for countries with relatively underdeveloped, moderately developed, and highly developed financial systems. Table IV illustrates how the impact of inflation, inflation uncertainty, and policy interventions varies across the distribution of financial development (FD).

Table IV Quantile regression results of financial development

	FD				
VARIABLES	Q10	Q25	Q50	Q75	Q90
PIS	-0.000234	-0.000509	-0.000924	-0.00175	-0.00237
	(0.745)	(0.834)	(1.238)	(1.342)	(1.327)
IT	0.295***	0.396***	0.510***	0.461***	0.303**
	(14.31)	(9.885)	(10.40)	(5.388)	(2.578)
PIS×IT	-0.00683	-0.0740*	-0.147***	-0.0696	-0.0740
	(0.347)	(1.935)	(3.154)	(0.853)	(0.660)
PI	-0.00468	-0.0250***	-0.0390***	-0.0535***	-0.113***
	(0.944)	(2.593)	(3.315)	(2.605)	(4.012)
PA	0.00378	-0.0176	-0.0394*	-0.0502	-0.101*
	(0.398)	(0.954)	(1.751)	(1.276)	(1.875)
PI×PA	0.000654	0.0128	0.0262**	0.0352	0.0828***
	(0.125)	(1.263)	(2.108)	(1.625)	(2.782)
Constant	0.0980***	0.172***	0.285***	0.437***	0.723***
	(11.26)	(10.17)	(13.77)	(12.12)	(14.59)
Observations	648	648	648	648	648

Note: Statistical significance is denoted by $p < 0.01$, $p < 0.05$, and $p < 0.10$.

The coefficient for inflation uncertainty (PIS) is negative across all quantiles, and its magnitude increases as we move from lower to higher percentiles. However, none of the coefficients are statistically significant at conventional levels, although the effects become more pronounced in the upper quantiles (Q75 and Q90). This pattern suggests that while inflation uncertainty may exert greater pressure on financially advanced economies, the overall evidence remains inconclusive. Still, the increasing magnitude supports the directional claim made in H2. Inflation targeting shows a strong and consistently positive effect on financial development across all quantiles, and is statistically significant at the 1% or 5% level throughout.

The impact is largest at the median (Q50, coefficient = 0.510), suggesting that inflation targeting contributes most to financial development in countries with moderate levels of financial depth, but remains significantly beneficial across the distribution. These results offer robust support for H3, confirming that inflation-targeting regimes enhance financial sector development by anchoring expectations and reducing macroeconomic uncertainty.The intersection effect of inflation uncertainty and inflation target (PIS×IT) is negative and statistically significant at the 25th and 50th percentiles. Specifically, the coefficients at Q25 and Q50 are –0.0740 and –0.147, respectively. These results suggest that inflation volatility dampens financial development more strongly in lower to median-income countries, where institutions and financial infrastructure are less resilient. This complements the findings from the OLS model and supports the view that inflationary volatility disproportionately affects less developed financial systems. The coefficient for inflation (PI) is consistently negative and statistically significant from Q25 through Q90, with increasing magnitude (e.g., –0.0250 at Q25 to –0.113 at Q90). This indicates that inflation's adverse effects intensify with the level of financial development. The findings strongly support H1, revealing that higher inflation erodes financial development more severely in more financially advanced economies, potentially due to larger real balance effects and greater reliance on long-term financial contracts. The Paris Agreement (PA) variable displays negative coefficients across all quantiles, becoming statistically significant at Q50 and Q90 (–0.0394 and –0.101, respectively). While only marginally significant, this suggests that participation in international climate policy may be associated with modest declines in financial development, possibly due to transitional costs, regulatory compliance burdens, or market uncertainty. However, this interpretation is tentative, and the relatively weak significance implies a limited direct effect.The interaction term between inflation and the Paris Agreement (PIPA) is positive and statistically significant at Q50 and Q90, with coefficients of 0.0262 and 0.0828, respectively. This implies that in countries committed to the Paris Agreement, the negative impact of inflation on financial development is significantly mitigated, especially in countries with more developed financial sectors. These findings support H5, highlighting that climate policy commitment can moderate inflation-driven financial disruptions, likely through market stabilisation efforts, green finance mechanisms, or improved institutional credibility. Panel A of Table V captures heterogeneous effects of inflation — particularly emphasising the rejection of slope equality. To assess whether the impact of inflation on financial development varies significantly across the distribution, we conducted a series of slope equality tests using F-statistics to compare the inflation coefficients at different quantiles. The results, reported in Table X, strongly reject the null hypothesis of slope equality for several quantile comparisons: Significant differences in the inflation effect are observed between the 10th percentile and higher quantiles (Q25–Q90), with F-statistics ranging from 4.34 to 5.64 and p-values consistently below 0.05. The inflation coefficient at the 25th percentile also differs significantly from that at the 90th percentile ($F = 2.98$, $p = 0.0849$), further supporting heterogeneity in the marginal effect of inflation across financial development levels. The homogeneity F-test across all quantiles yields $F = 2.52$, $p = 0.0400$, indicating statistically significant variation in the slope of inflation's impact across the quantile spectrum.

Table V F-Statistics Testing for Slope Equality across Quantiles

Quantile	Q10	Q25	Q50	Q75
Panel A: F-Statistics Testing for Slope Equality of Inflation across Quantiles				
Q25	5.64**			
	(0.0179)			
Q50	5.22**	1.17		
	(0.0277)	(0.2796)		
Q75	5.57**	1.97	0.49	
	(0.0186)	(0.1609)	(0.4844)	
Q90	4.34**	2.98*	2.15	1.94
	(0.0376)	(0.0849)	(0.1429)	(0.1637)
Homogeneity F-Test		2.52**(0.0400)		
Panel B: F-Statistics Testing for Slope Equality of Inflation Target across Quantiles				
Q25	2.17			
	(0.1411)			
Q50	6.65**	2.21		
	(0.0101)	(0.1372)		
Q75	4.90**	0.55	0.44	
	(0.0272)	(0.4585)	(0.4844)	
Q90	0.02	1.16	5.08**	4.70
	(0.8847)	(0.2827)	(0.0246)	(0.0305)
Homogeneity F-Test		1.96*(0.0983)		

Note: The homogeneity F-statistic tests for the equality of the slope coefficient across all quantiles. Numbers in parentheses equal p-values. We use 10,000 bootstrap replications to obtain estimates of the standard errors, using STATA, for the parameters in quantile regression (Buchinsky, 1998).These results provide robust statistical confirmation that the marginal effect of inflation is not constant across countries with differing levels of financial development. Instead, the influence of inflation becomes progressively more negative and statistically significant as financial depth increases — a pattern also visible in the quantile regression estimates themselves. This evidence justifies the use of quantile regression over traditional mean-based estimation methods such as OLS. Unlike OLS, which assumes a homogeneous relationship across the entire distribution, quantile regression uncovers distribution-sensitive dynamics — revealing that inflation poses a greater threat to financial sector development in financially advanced economies, where the inflation-induced erosion of real asset value and long-term contracts is more pronounced. Thus, the F-tests for slope equality confirm H6 and reinforce the methodological advantage of the quantile approach in uncovering policy-relevant heterogeneity that would be missed under a uniform modelling framework. Panel B of Table VI presents the results of F-statistic testing the equality of slope coefficients for inflation targeting (IT) across various quantiles of the financial development distribution. The findings indicate that the effect of IT is not entirely homogeneous across the distribution, although the degree of heterogeneity is more modest compared to inflation. Statistically significant differences in slope coefficients are observed between Q50 and Q10, Q50 and Q75, as well as Q90 and Q50/Q75, suggesting that the marginal benefits of inflation targeting differ between moderately and highly developed financial systems. The homogeneity F-test yields F = 1.96 with a p-value of 0.0983, which provides marginal evidence against the null of equal slope effects across quantiles. These results imply that while inflation targeting has a generally positive impact on financial development—as also observed in the baseline and quantile regression estimates—the magnitude of this impact is not uniform. The effect appears to be strongest at the median quantile (Q50), indicating that economies with mid-level financial development benefit most from adopting inflation targeting, likely due to the credibility and macroeconomic stability it provides at a crucial stage of financial maturation. In contrast, the effect is comparatively weaker at both the lower and upper ends of the distribution, suggesting diminishing returns or implementation constraints in very low or high financial depth environments.

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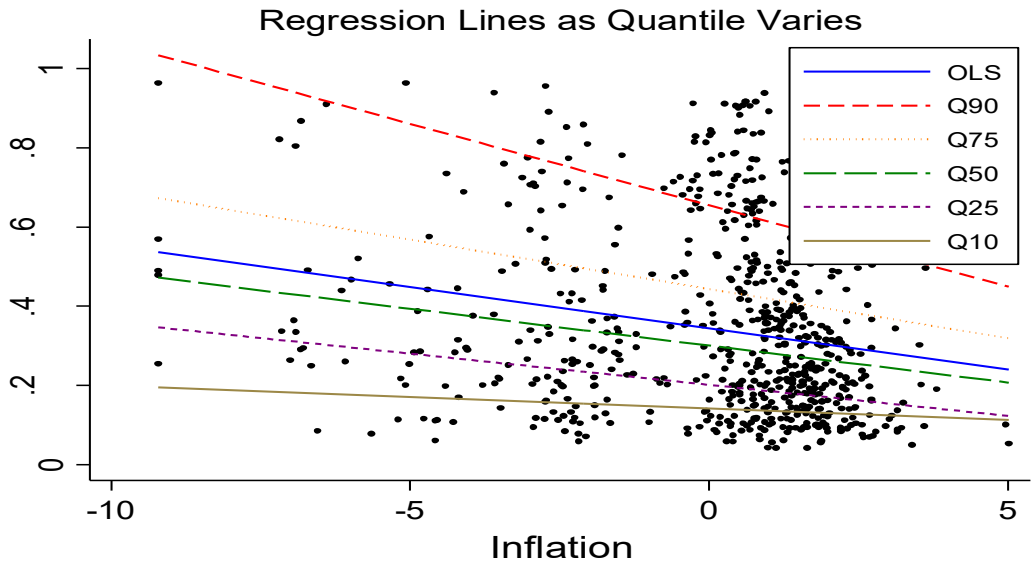

Figure 1. This figure plots the estimated coefficients of inflation from the quantile regression model across selected quantiles of the financial development distribution (Q10 to Q90). The vertical bars represent 95% confidence intervals. The figure demonstrates that the effect of inflation becomes increasingly negative and statistically significant in higher quantiles, indicating stronger adverse impacts in more financially developed countries. This pattern supports the hypothesis of slope heterogeneity and highlights the importance of distribution-sensitive policy analysis.

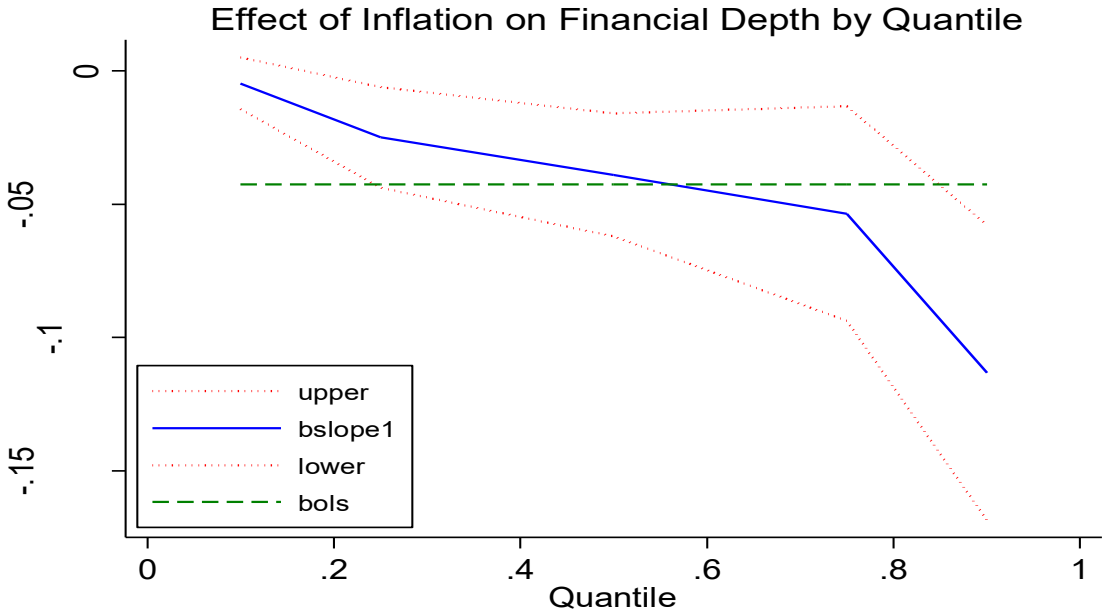

Figure 2. This figure presents the smoothed trend of inflation's marginal effect on financial development across the entire conditional distribution. The fitted line highlights a clear downward slope, showing that inflation's impact intensifies with financial depth. This visual evidence complements the formal slope equality tests, confirming that the relationship between inflation and financial development is not constant across quantiles.

C. 4.3 Robustness results

To ensure the robustness of the baseline results, we re-estimate the main regression models using two alternative measures of financial development: The Financial Institutions Index (FII) and the Financial Markets Index (FM). These subcomponents of the overall Financial Development Index (FD) offer a more granular view of the underlying structure of financial systems. The FII captures the depth and outreach

of institutions such as banks and credit providers, while FM reflects the size and activity of equity and bond markets. The results remain broadly consistent across both alternative specifications. Specifically, inflation and inflation uncertainty continue to exhibit significant negative effects, reaffirming their detrimental role in both institutional and market-based financial development.

Table VI Quantile Regression Results of Financial Institutions Index

	FII				
VARIABLES	Q10	Q25	Q50	Q75	Q90
PIS	-0.000430	-0.000840	-0.00136*	-0.00152	-0.00271**
	(0.860)	(0.931)	(1.739)	(1.138)	(2.150)
IT	0.245***	0.323***	0.379***	0.311***	0.282***
	(7.453)	(5.454)	(7.386)	(3.557)	(3.413)
PISIT	0.00560	-0.0507	-0.123**	-0.0560	-0.106
	(0.179)	(0.897)	(2.507)	(0.671)	(1.342)
PI	-0.0113	-0.0386***	-0.0453***	-0.0469**	-0.0860***
	(1.438)	(2.711)	(3.674)	(2.232)	(4.336)
PA	0.00940	-0.00357	-0.0211	-0.0319	-0.0733*
	(0.623)	(0.131)	(0.892)	(0.794)	(1.932)
PIPA	0.00600	0.0151	0.0256**	0.0291	0.0706***
	(0.722)	(1.009)	(1.969)	(1.313)	(3.378)
Constant	0.179***	0.277***	0.411***	0.553***	0.768***
	(12.96)	(11.11)	(19.00)	(14.98)	(22.04)
Observations	648	648	648	648	648
	F-Statistics Testing for Slope Equality across Quantiles				
Q25	4.44**				
	(0.0355)				
Q50	5.65**	0.25			
	(0.0178)	(0.6151)			
Q75	2.87*	1.25	0.01		
	(0.0910)	(0.9306)	(0.9306)		
Q90	3.28*	1.00	1.00	1.06	
	(0.0708)	(0.3038)	(0.3184)	(0.3038)	
Homogeneity F-Test		2.17*(0.0713)			

Note: The homogeneity F-statistic tests for the equality of the slope coefficient across all quantiles. Numbers in parentheses equal p-values. We use 10,000 bootstrap replications to obtain estimates of the standard errors, using STATA, for the parameters in quantile regression (Buchinsky, 1998). To assess the robustness of our main findings, we re-estimate the quantile regression model using the Financial Institutions Index (FII) as an alternative proxy for financial development. The results, presented in Table VI, confirm the key patterns observed in the baseline specification. Inflation (PI) remains negatively and significantly associated with institutional financial development, with the effect intensifying across higher quantiles. The coefficient increases in absolute value from –0.0386 (Q25) to –0.0860 (Q90), all significant at the 5% or 1% level. This reinforces the earlier conclusion that inflation disproportionately harms financially advanced institutional environments, consistent with Hypothesis H1. Inflation uncertainty (PIS) also exhibits increasingly negative effects, becoming statistically significant at the median (Q50) and upper quantiles (Q90). This supports Hypothesis H2, suggesting that volatility in inflation undermines institutional confidence and credit market stability, particularly where financial systems are more developed. The effect of inflation targeting (IT) is positive and highly significant across all quantiles, with the strongest impact observed at Q50 (0.379, t = 7.386). This confirms Hypothesis H3 and the robustness of the claim that inflation targeting enhances financial institutional development by promoting macroeconomic credibility and risk mitigation. The interaction term (PIPA = PI × PA) is positive and statistically significant at the median and upper quantiles, particularly at Q90 (0.0706, $p < 0.01$). This suggests that climate policy commitments (e.g., the Paris Agreement) help to offset the adverse effect of inflation, especially in stronger institutional settings — further reinforcing Hypothesis H5. Finally, the F-

statistics testing for slope equality across quantiles indicate significant heterogeneity in the inflation effects (F = 2.17, p = 0.0713), supporting Hypothesis H6. This again underscores the value of using quantile regression to uncover distribution-sensitive policy dynamics that would otherwise be masked by mean-based estimation.

Table VII Quantile Regression Results of Financial Markets Index

	FM				
VARIABLES	Q10	Q25	Q50	Q75	Q90
PIS	-5.54e-07	-5.02e-05	-0.000305	-0.000941	-0.00273*
	(0.00380)	(0.324)	(0.297)	(0.573)	(1.717)
IT	0.305***	0.372***	0.676***	0.559***	0.315***
	(31.92)	(36.68)	(10.02)	(5.189)	(3.014)
PISIT	-0.00408	-0.0251***	-0.208***	-0.0833	-0.0631
	(0.447)	(2.587)	(3.226)	(0.811)	(0.633)
PI	0.000137	-0.00260	-0.0223	-0.0544**	-0.0537**
	(0.0596)	(1.064)	(1.378)	(2.103)	(2.143)
PA	-0.000250	-0.00320	-0.0256	-0.0467	-0.0511
	(0.0570)	(0.685)	(0.827)	(0.944)	(1.065)
PIPA	-0.000134	0.00273	0.0185	0.0250	0.0258
	(0.0555)	(1.063)	(1.083)	(0.918)	(0.974)
Constant	0.000264	0.00949**	0.0825***	0.340***	0.617***
	(0.0654)	(2.215)	(2.898)	(7.478)	(14.00)
Observations	648	648	648	648	648
	F-Statistics Testing for Slope Equality across Quantiles				
Q25	0.76				
	(0.3849)				
Q50	1.31	1.10			
	(0.2523)	(0.2947)			
Q75	15.27***	13.69***	2.12		
	(0.0001)	(0.0002)	(0.1455)		
Q90	14.71***	13.2***	0.40	0.00	
	(0.0001)	(0.0002)	(0.5256)	(0.9877)	
Homogeneity F-Test		3.92***(0.0037)			

Note: The homogeneity F-statistic tests for the equality of the slope coefficient across all quantiles. Numbers in parentheses equal p-values. We use 10,000 bootstrap replications to obtain estimates of the standard errors, using STATA, for the parameters in quantile regression (Buchinsky, 1998).To validate the consistency of our findings, we re-estimate the quantile regression model using the Financial Markets Index (FM) as an alternative proxy for financial development. The results, reported in Table VII, reinforce the key conclusions drawn from the baseline and FII-based models, while also revealing important nuances specific to financial markets. The effect of inflation (PI) on FM is negligible and statistically insignificant at the lower quantiles (Q10–Q50), but becomes significantly negative at the upper quantiles: Q75 (–0.0544, $p < 0.05$) and Q90 (–0.0537, $p < 0.05$). This pattern indicates that inflation exerts a more harmful influence in countries with more developed financial markets, consistent with Hypothesis H1. These results align with the view that inflation erodes the real value of financial assets, undermining investor confidence and market participation in deeper capital markets.

Inflation uncertainty (PIS) becomes statistically significant only at Q90 (–0.00273, $p < 0.10$), suggesting that volatility in inflation disproportionately affects countries at the highest levels of market development. This supports Hypothesis H2, albeit with weaker and more localized effects in the upper quantile. The inflation targeting (IT) variable remains strongly positive and statistically significant across all quantiles, with the largest coefficient at Q50 (0.676, t = 10.02). This consistent and robust association confirms Hypothesis H3, highlighting the effectiveness of IT regimes in supporting capital market development through enhanced policy credibility and reduced inflation expectations. The interaction term (PIPA = PI × PA) is not statistically significant in any quantile, suggesting that the moderating effect of climate

commitments on inflation's impact may be more relevant to institutional financial development than to market structures. This result contrasts with earlier findings using the FD and FII indices, suggesting some divergence in how environmental policy frameworks interact with inflationary dynamics across financial system components. Importantly, the F-statistic testing for slope equality across quantiles yields a homogeneity $F = 3.92$, $p = 0.0037$, rejecting the null hypothesis of equal coefficients. Significant slope differences are also observed between Q25 and Q75–Q90, and between Q50 and Q75–Q90. These results provide strong support for Hypothesis H6, confirming that the effects of macroeconomic and policy variables vary systematically across the distribution of financial market development. Together, the findings confirm the robustness of our main results while revealing dimension-specific insights. The inflation and inflation targeting effects are consistent across FD, FII, and FM, while the moderating role of the Paris Agreement appears stronger in institutional settings than in capital markets.

V. CONCLUDING REMARKS

This study investigates the impact of inflation, inflation uncertainty, inflation targeting, and international climate commitments on financial development, using panel data for 81 countries from 2007 to 2021. Departing from conventional mean-based approaches, we adopt a quantile regression framework to uncover distribution-sensitive effects across different levels of financial depth. The results reveal that both inflation and inflation uncertainty exert increasingly negative effects on financial development as countries move up the financial development distribution. These effects are particularly pronounced in more advanced financial systems, where inflation erodes the real value of long-term contracts and discourages investment. The results strongly support the argument for heterogeneous policy impacts and validate the use of quantile-based methodologies. Our findings also demonstrate that inflation targeting (IT) is consistently associated with higher financial development across all quantiles, particularly around the median. This underscores the effectiveness of IT frameworks in enhancing policy credibility and stabilizing macroeconomic expectations. In contrast, the Paris Agreement (PA) exhibits a moderating effect on the inflation–financial development nexus, particularly in more developed institutional contexts. This suggests that climate-related policy commitments can help buffer the destabilizing impact of inflation, possibly through regulatory reform, investor signalling, or enhanced policy coherence Robustness checks using two alternative proxies—Financial Institutions Index (FII) and Financial Markets Index (FM)—further affirm the stability of these results. While the negative effects of inflation and the benefits of IT persist across both institutional and market dimensions, the moderating effect of the Paris Agreement appears more relevant to institutional development than market-based finance. Overall, this study contributes to the macro-financial literature by highlighting the distributional heterogeneity of inflation dynamics and policy responses. It also provides empirical evidence on the interplay between macroeconomic management and climate policy in shaping financial development trajectories. These findings carry important implications for central banks, financial regulators, and international institutions, suggesting that tailored monetary and climate strategies are essential for promoting inclusive and resilient financial systems in the face of rising inflation uncertainty and environmental transition.

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