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DECODING FINANCIAL DISTRESS IN DEVELOPED ECONOMIES: KEY DETERMINANTS AND TRENDS

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Abstract
In the case of developed countries, this study looks at the factors that contribute to financial distress between 2002 and 2021. For empirical analysis, a total of 27 developed economies have been chosen. The explanatory factors in this study include the budget deficit, balance of payments, fiscal and monetary policy, gross domestic products, political instability, corruption, and inflation; the dependent variable is financial distress. A fixed and random effect model has been used to explore the effects of explanatory factors on financial distress. The study showed that balance of payments, fiscal policy, gross domestic product, political instability, and inflation has insignificant effects on financial distress, budget deficit, monetary policy, and corruption have significant effects based on analysis of developed countries. The results show that executing efficient fiscal and monetary policies, keeping a close eye on the budget, managing the balance of payments through market reforms, and all of these things are critical to the growth and development of a nation.
Keywords: *Distress, budget, deficit, monetary, fiscal, corruption, political instability*

INTRODUCTION

An entity whether it be an economy, company, or person that is having trouble making enough money to cover its expenses is said to be in financial distress. This kind of situation frequently results from high fixed expenses, a significant amount of non-liquid assets, or revenue sources that are vulnerable to economic downturns (Ufo, 2015). In instances of financial distress, the value of assets experiences a precipitous decline, leading to difficulties in fulfilling obligations for both businesses and consumers. Financial institutions, meanwhile, grapple with liquidity shortages. The availability of financial distress is frequently linked with panic scenarios or bank runs, wherein investors hastily divest assets or withdraw funds from bank accounts due to apprehensions that the value of those assets may plummet within the financial institution. Additional circumstances that can be classified as financial distress include the explosion of a speculative monetary bubble, a stock market crash, a sovereign default, or a currency distortion (Mehmood et al., 2018; Ali & Audi, 2023).

Financial distress may manifest at the level of individual bank or propagate throughout a singular economy, a regional economy, or even extend globally. Contributing factors to macro-level financial distress encompass foundational failures, unforeseen or erratic human behaviors, excessive risk-taking motivations, regulatory lapses or failures, and contagion resembling the spread of systemic issues from one country to another. If left unmitigated,

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such distress has the potential to induce an economic downturn or recession at the national level. Despite proactive measures aimed at averting country-level financial distress, occurrences may still arise, intensify, or proliferate. The likelihood of macro-level financial distress is intricately linked to the efficiency of economic performance, either directly or indirectly (Attari et al., 2017).

Studying financial distress in developed countries is essential as it provides a comprehensive understanding of global economic dynamics and stability. It highlights the different causes, consequences, and policy responses required for varied economic contexts, aiding in the development of tailored strategies to prevent and mitigate financial crises. This knowledge helps investors manage risks and allocate resources wisely, while also guiding international organizations and policymakers in providing targeted support and creating effective fiscal and monetary policies. By understanding financial distress across diverse economic landscapes, we can promote global economic health, resilience, and sustainable development (Laeven and Valencia, 2013). The comprehensive examination of the economic distress during the early 20s underscores the pivotal role of maintaining the level of broad money growth in response to shocks, representing a crucial aspect of financial crisis management (Friedman and Schwartz, 1963). Debt distress, particularly at the macro level, can result in significant losses for both domestic and international banks, posing a potential threat to the stable condition of financial systems in the distressed country as well as in others. This has the potential to impact economic growth and sow discord in global financial markets (Shabbir and Rehman, 2016; Ali, 2022).

The link between budget deficits and other macroeconomic factors constitutes widely debated subject among analysts and policymakers in developed nations (Aisen and Hauner, 2013; Audi & Ali, 2023; Audi et al., 2022; Ali, 2022). It is highly acknowledged that substantial budget deficits can have negative macroeconomic effects, including high-interest rates, current account deficits, and inflation (Bernheim, 1989). While financial distress and the balance of payments represent distinct concepts, they can be interconnected in the intricate web of global economics. It shows the amount of foreign currency that can be bought with one unit of the home currency or the amount that must be spent in the home currency in order to buy one unit of the foreign currency (Soderstine, 1998; Audi et al., 2023). There is strong evidence in some cases to imply that tax rates in developed economies behave procyclical. For example, tax rates were lowered in Argentina during the 1991–1994 economic boom. However, a contractionary financial strategy incorporating tax rate increases was put into place when the economy experienced a slump in 1995 (Talvi and Vegh, 2005).

Comprehending the macroeconomic relationship between interest rates and financial distress necessitates consideration of the broader economic context, financial policy decisions, and the interconnectedness of various economic factors. The effectiveness of financial policy in addressing financial distress depends on the specific economic conditions and challenges facing a country (Reinhart and Rogoff, 2010). Economic growth can contribute to financial stability (Ali et al., 2023; Audi & Ali, 2023), but unchecked growth and excessive risk taking may lead to financial distress. Conversely, financial distress can act as a drag on economic growth, emphasizing the importance of maintaining a balance and addressing vulnerabilities in both the financial and real sectors of the economy (Curry, 2020; Ali, 2022). The link between political instability and financial distress at the macroeconomic level holds significant implications for a country's economic well-being. Political instability denotes a situation where the political environment is uncertain, marked by frequent changes in leadership, policy volatility, and a lack of institutional stability (Bukhari and Masih, 2016).

The nexus between financial distress and corruption is multifaceted, involving a complex interplay of economic, social, and institutional factors. While corruption itself does not directly cause financial distress, its presence can exacerbate economic challenges and contribute to various issues that may lead to financial distress (Mauro, 1995). Financial distress and inflation have a variable link that varies depending on the economic climate, the industries involved, and the nation. A banking crisis is more likely to occur when there is low growth and high inflation (Eichengreen and Rose, 1998). Thus, it is very important to examine the determinants of financial distress to achieve socioeconomic targets.

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LITERATURE REVIEW

This part of the paper is comprised of literature review, most relevant and recent studies have been selected as literature review. The comprehensive analysis of literature enhances our understanding that financial instability remains a focal point among researchers and policymakers. Various studies (Citterio & King, 2023; Guizani & Abdalkrim, 2023; Nuswantara et al., 2023; Younas et al., 2022; Chilbole et al., 2022; Jia and Li, 2022; Kang et al., 2022; Negoro and Wakan, 2022; Ashraf et al., 2021; Dang and Tran, 2021; Dinh et al., 2021; Lizares, 2021; Mariano et al., 2021; Monika and Noviari, 2021; Putri, 2021; Wangsih et al., 2021; Yuliastari et al., 2021; Abbas et al., 2020; Sadjiarto et al., 2020; Inekwe et al., 2019; Khoja et al., 2019; Malik et al., 2019; Supriyanto and Darmawan, 2018; Altman et al., 2016) have provided diverse metrics and factors influencing financial instability. Citterio and King (2023) examine how environmental, social, and governance (ESG) factors might be used to forecast financial problems in banks. The information was gathered from Thomson Reuters and financial statements of 362 Commercial Banks and 28 European States spanning the years 2012 to 2019. The Logit, localizer type directional aid, support vector machine, decision tree and random forest approach are used to analyze the data. The z-score is used as a dependent variable and environmental social governance, non-performing loans, return on assets, nominal ordinal internal ratio, gross domestic products, and inflation used as independent variables. The study presents a bank financial distress model that incorporates environmental social governance factors, reducing the risk of misclassifying distressed banks as solid. This model suggests that bank managers should incorporate environmental governance factors in high-level prediction models and enhance administrative efforts.

Nuswantara et al. (2023) explore how political connections influence the relationship between board size and the presence of women on boards with financial distress. Their research utilizes panel data from 45 companies listed on the Indonesian Stock Exchange from 2016 to 2021. The data is sourced directly from the Indonesian Stock Exchange. The study employs ordinary least squares (OLS) regression, fixed effects, random effects, and robust analysis, conducted using Stata software. Financial distress is the dependent variable, while the independent variables include board size, the presence of women on boards of commissioners, and the presence of women on boards of directors. Additionally, the study examines how profitability relates to financial distress, with political connections acting as a moderating factor. The findings indicate that board size alone does not significantly impact financial distress. However, having more women on boards of commissioners and directors can reduce financial distress.

Chilbole et al. (2022) use time series data from 39 Kenyan commercial banks spanning the years 2014 to 2020 to examine the impact of liquidity distress. The information is collected from the reports of the commercial bank. The data is analyzed using the hasuman test, inferential analysis, and unit root test. Liquidity assets and total deposits are employed as independent variables, and the return on assets is used as the dependent variable. The analysis discovered that Kenyan commercial banks' performance is highly impacted by liquidity. Banks should concentrate on obtaining enough resources, encouraging their customers to maintain a strong liquidity position, and screening loans to lower non-execution in order to improve their liquidity position.

Kang et al. (2022) investigate the effect of financial distress in cooperative financial institutions, the study suggests using Merton Distance to Default (Merton DD) as a dependent variable to measure distress which construct with a z-score and covariates of the hazard functions (financial and organizational) as independent variables. The data is analyzed by the logit and hazard model. The sample of the credit union Taiwan is used from the time duration is 2001 to 2009. The data is collected from the credit union reports. The study reveals a strong inverse relationship between productivity and financial distress risk, with limited-scale credit unions having higher risks. Asset scale and performance also impact risk, with modest fluid credit unions at higher risk. Low capitalization and a positive link between operating expenses and total assets scale also contribute to financial distress risk.

Ashraf et al. (2022) investigate the influence of board committee independence on financial distress likelihood. This study based on the panel series study of China and UK firms from the year of 2007 to 2016. The data is

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collected from the Bloomberg, DataStream and China Stock Market. The paired t-test, Robustness tests, and conditional logistic regression are used to analyze the data. The dependent variable of this study is financial distress and the independent variables are profitability, liquidity, leverage and state ownership for China. The study suggests that two nations could adopt corporate governance strategies, increasing independent directors and board panels to protect minority investor interests, ensure a transparent leader remuneration process, and enhance board structure.

Dinh et al. (2021) study the forecasting of company financial distress. The panel data of Indonesia, Singapore, Philippines, Malaysia, Thailand, and Vietnam are used from the time duration of 1997 to 2016. The data is gathered from the 720 firms' financial statement and to analyze the data descriptive statistic and distance to default model are used. The dependent variable is financial distress and credit crisis, non-performing loans, interest coverage ratio are considered as independent variables. Insurance companies in Ethiopia are in a protected zone, with productivity, firm condition, leverage, and company age negatively affecting financial distress. However, resource quality and misfortune proportion positively impact financial distress, suggesting increased focus on inward climate. The DD model can predict financial distress in most ASEAN nations, helping financial associations identify credit risk issues.

Mariano et al. (2021) investigate the probability of financial difficulties in businesses. The time series data utilized in this study covered UK listed firms from 2010 to 2018. Descriptive statistics, the correlation coefficient, and logistic regression are used to estimate the data for the results. The data is taken from the Fame Database. This study's primary indicator is financial distress, which is regarded as a dependent variable. Independent factors include board size, director compensation, ownership concentration, firm age, financial expenses, retained earnings, and CEO duality. The study suggests that ownership fixation, freedom, board size, and director remuneration negatively impact financial distress. Larger ownership focus and freedom may lead to superior presentations, while higher remuneration boosts director motivation and company performance.

THEORETICAL AND CONCEPTUAL LINKS

In this section, we delve into the theoretical underpinnings that underlie the empirical model employed in this study. The primary aim of the theory is to construct model that effectively capture human and social behavior. Through the lens of theory, researchers can explore the causal relationship between different variables and gain a more profound appreciation of the underlying mechanism that drive observed outcomes (Negal, 1963). Financial stability plays a pivotal role in fostering economic growth, contingent upon effective management of financial turmoil. Financial and monetary systems are designed to optimize the productivity of tangible activities and the allocation of resources. Extensive research in financial economics has consistently demonstrated the correlation between financial advancement and the enhancement of economic growth and efficacy (Levine, 1997; Rajan and Zingales, 1998). The viability of strategy reactions and the, generally speaking, economic setting assume essential parts in deciding the degree of financial distress related to budget deficits (Barroy, 2016).

The balance of payments and financial distress requires a far-reaching examination of countries outside economic position. A very oversaw balance of payments adds to financial strength, while imbalances or unreasonable patterns might expand the gamble of financial distress (Altman, 1968). Severity measures and tax increments can have direct outcomes on countries and organizations, potentially compounding financial distress in the private sector. If investors and creditors become concerned about a country's ability to manage its loan, it can result in downgrades by credit rating agencies (Pandapotan and Nurlis, 2023). Higher interest rates can increase the cost of servicing debt for the government and other borrowers. This can lead to financial distress, especially for entities with variable-rate debt or those heavily reliant on borrowed funds (Bostan and Firtescu, 2019).

Various theoretical frameworks can elucidate the causes of financial distress, choosing specific variables for models and substantiating the functional connections between these variables (Altman and Hotchkiss, 2006). The liquidity preference theory, stemming from Keynes's seminal work "The General Theory of Employment, Interest,

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and Money," defines liquidity preference as the collective demand for money within the economy (Keynes, 1936). This theory underscores that the net cash flows relative to current liabilities should serve as the primary determinant in characterizing the financial distress of both organizations and economies (Altman and Hotchkiss, 2006). Liquidity risk theory explains the management of foreign exchange reserves and suggests a measure called liquidity at risk (Greenspan, 1999). Liquidity risk pertains to the exposure of a lender to potential losses, whether financial or otherwise, due to a borrower's inability to meet their obligations as specified in the agreed terms (Nyunja, 2011). In times of crisis, illiquid assets become difficult to liquidate, exacerbating financial instability and potentially leading to distress sales, fire sales, or even bankruptcy. Based on the mentioned theoretical links, the conceptual model of the study becomes as:

Conceptual Framework

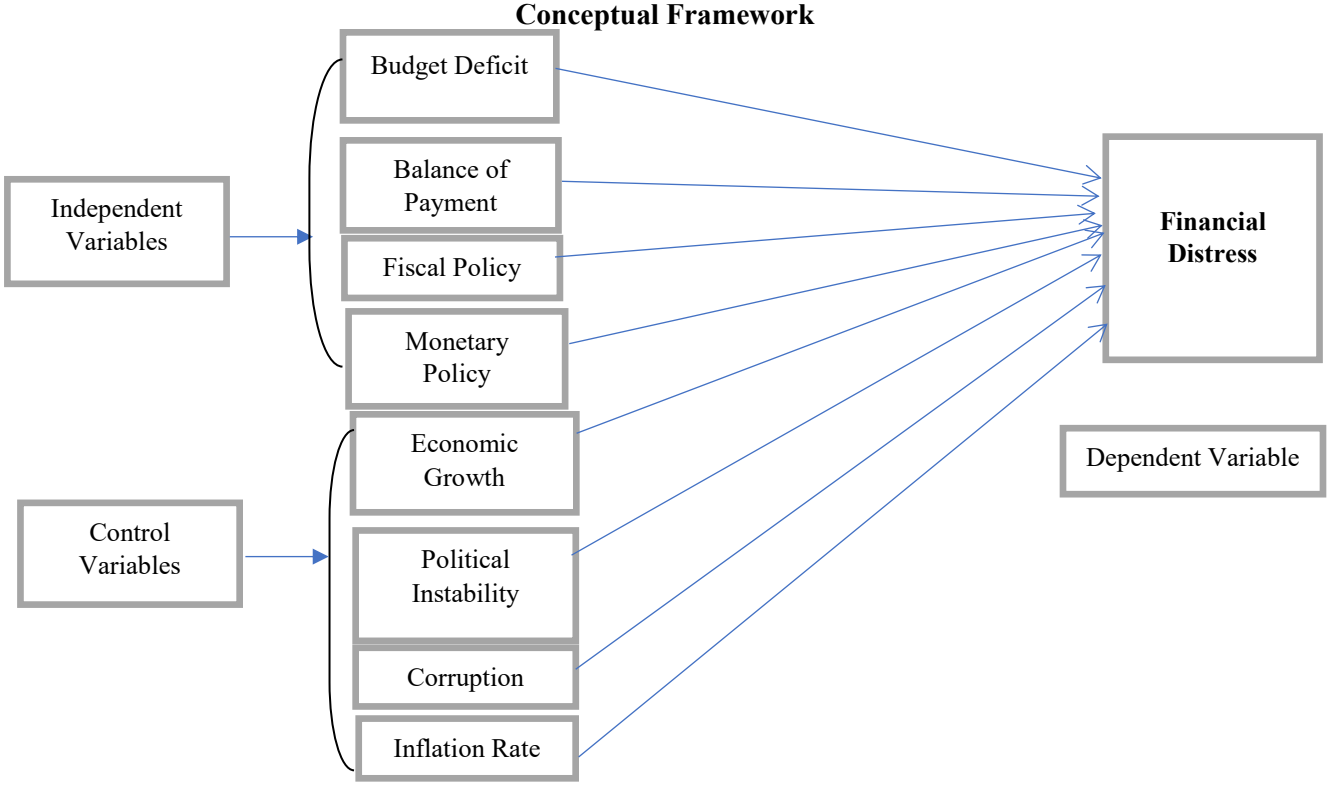

Figure-1

ECONOMETRIC MODEL

For examining the coefficients of the selected variables, the econometric model can be written as:

FDit = β0+β1BDit+β2BOPit+β3FPit+β4MPit+β5Xit+eit

Based on the existing literature, scholars view panel data analysis as the most effective approach for handling data in econometrics. The panel data we have selected are balanced datasets, and based on their characteristics, we have opted for the fixed-effects method. In this method, the intercept is specific to each group, allowing the model to account for different intercepts across groups. This approach involves introducing dummy variables, where each group is represented by a specific dummy in the equation. Therefore, the equation can be expressed as follows:

$Y_{it} = \alpha_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \cdots + \beta_k X_{kit} + \mu_{it}$

This can be written in a matrix notation as:

$Y = D\alpha + X\beta' + \mu$

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$$Y = \begin{bmatrix} Y_1 \\ Y_2 \\ . \\ . \\ . \\ Y_N \end{bmatrix}, \text{D}= \begin{pmatrix} i_T & 0_{\dots} & 0 \\ 0 & i_T & 0 \\ 0 & 0 & i_T \end{pmatrix} NTxk$$

$$X = \begin{pmatrix} x_{11} & \cdots & x_{1k} \\ \vdots & \ddots & \vdots \\ x_{N1} & \cdots & x_{NK} \end{pmatrix} NTxk$$

$$\alpha = \begin{bmatrix} \alpha_1 \\ \alpha_2 \\ . \\ . \\ . \\ \alpha_N \end{bmatrix} NTxk \ , \beta' = \begin{bmatrix} \beta_1 \\ \beta_2 \\ . \\ . \\ . \\ \beta_N \end{bmatrix} NTxk$$

In this context, dummy variables employ distinct estimation techniques tailored to each individual section or group. To assess the appropriateness of the fixed effects method, researchers often utilize the Hausman test.

DESCRIPTION OF VARIABLES

Financial Distress (FD)

Financial distress can be defined as a reaction, akin to mental or tangible discomfort, caused by concerns regarding one's overall financial well-being. This encompasses perceptions related to one's capability to manage financial resources such as income and savings, meet financial obligations, repay debts, and provide for life's necessities and desires.

Measurement: Debt-to- reserve ratio

Budget Deficit (BD)

Generally speaking, budget deficit is current and capital income and official grants got, less complete consumption and loaning minus repayments. Information is displayed for focal government.

Measurement: Total government expenditure and government's current revenue

Balance of Payment (BOP)

Net current exchange appears on the balance of payments whenever an economy transfers goods, services, income, or financial items without expecting anything in return. All transfers categorized as current, excluding those designated as capital, are accounted for. The data are denominated in current U.S. dollars.

Measurement: Net current transfers (% of GDP)

Fiscal Policy (FP)

The segment governmental of strategy focused on boosting income through taxation and determining the levels and objectives of expenditures.

Measurement: Total tax revenues received as percentage of GDP

Monetary Policy (MP)

The management of the monetary supply within an economy and the mechanisms through which new money is injected.

Measurement: Real interest rate payments (% of revenue)

RESULTS AND DISCUSSION

This section of the research presents the findings and discussion. The study investigates the factors influencing a country's financial distress through a comparative analysis of developed nations from 2002 to 2021. To investigate the intertemporal properties of the data set, this study applied descriptive statistics. Descriptive statistics reveal distinctive characteristics of the dataset, including metrics like standard deviation, minimum and maximum values,

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median, and mean values of the variables. Table 4.1 presents the estimated results of these descriptive statistics. According to the findings, the average level of financial distress is reported as 15.19 percent. The majority of observations fall within the middle of the range, according to the median value of 6.56. The highest possible number, 191.9928, illustrates that there are certain instances where financial distress is greater. The observed financial distress has a positive limit, according to the minimum value of 0.142811. The variation of financial distress between the data points is shown by the standard deviation of 23.73396. The mean value of budget deficit is 12.38674 and the median value of 13.38604 indicates that the distribution is biased toward a lower budget deficit and the majority of observations are above the mean. The highest value of 27.446331 shows that the dataset contains extreme values or outliers. The lowest value of -4.579285 shows that in some circumstances the results might be negative. The standard deviation of 6.447066 reflects a relatively high variability of budget deficit among the data points. The normal value of balance of payment is -0.5565, which represents the average rate of balance of payment. The median value of balance of payment is -0.775636. The highest value 27.14333 shows that the dataset contains extreme values or outliers. The smallest value -29.80 show that in some circumstances the results might be negative. The standard deviation of 6.959511 reflects a relatively high variability of balance of payment among the data points. The mean value of fiscal policy for the specified time period is shown by the mean fiscal policy value of 19.74928. The midway value of regulatory policy observation is shown by the median fiscal policy value of 20.60930. The highest value 37.61285 shows that the dataset contains extreme values or outliers. The smallest value 7.903518 shows that in some circumstances the results might be zero or nil. The standard deviation of 5.460567 reflects a relatively high variability of fiscal policy among the data points. The average value of monetary policy is 7.058711 and the median value of 6.010972 indicates that the distribution is biased toward a lower monetary policy and the majority of observations are below the mean. The highest value of 34.23891 shows that the dataset contains extreme values or outliers. The minimum value of 0.000639 shows that in some circumstances the results might be zero or nil. The standard deviation of 4.94525 reflects a relatively high variability of monetary policy among the data points.

The average value of gross domestic product is 2.367975 and the median value of gross domestic product is 2.523924. The highest value of 2.47525 shows that the dataset contains extreme values or outliers. The minimum value of -23.50810 shows that in some circumstances the results might be negative. The standard deviation of 3.958788 reflects a relatively high variability of gross domestic product among the data points. The average value of political instability is 0.709795 and the median value of 0.807228 indicates that the distribution is biased toward a lower political instability and the majority of observations are above the mean. The highest value 1.625211 shows that the dataset contains extreme values or outliers. The minimum value -1.625211 shows that in some circumstances the results might be negative. The standard deviation of 0.550430 reflects a relatively high variability of political instability among the data points. The average value of corruption is 1.209933, and the median value of corruption is 1.346402. The highest value 2.380319 shows that the dataset contains extreme values or outliers.

Table 1: DESCRIPTIVE STATISTICS OF DEVELOPED ECONOMIES

	FD	BD	BOP	FP	MP	GDP	PI	COR	INF
Mean	15.19141	12.38674	-0.556506	19.74928	7.058711	2.367975	0.709795	1.209933	2.623881
Median	6.564066	13.38604	-0.775636	20.60930	6.010972	2.513924	0.807228	1.346402	1.991393
Maximum	191.9928	27.46331	27.14333	37.61285	34.23891	24.47525	1.620293	2.380319	23.15326
Minimum	0.142811	-4.579285	-29.80000	7.903518	0.000639	-23.50810	-1.625211	-0.440713	-4.624598
Std. Dev.	23.73396	6.447066	6.959511	5.460567	4.945425	3.958788	0.550430	0.762023	2.980472
Sum Sq. Dev.	303619.2	22403.35	26106.36	16071.79	13182.44	8447.211	163.3024	312.9862	4788.053
Observations	540	540	540	540	540	540	540	540	540

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The minimum value -0.440713 show that in some circumstances the results might be negative. The standard deviation of 0.762023 reflects a relatively high variability of corruption among the data points. The average value of inflation is 2.623881 and the median value of 1.991393 indicates that the distribution is biased toward a lower inflation and the majority of observations are below the mean. The highest value 23.15326 shows that the dataset contains extreme values or outliers. The minimum value -4.624598 shows that in some circumstances the results might be negative. The standard deviation of 2.980472 reflects a relatively high variability of inflation among the data points.

The correlation matrix shown in table 2, explains the relationship between the different variables in the dataset. Each matrix column shows the correlation coefficient between any two, with value ranging from -1 to 1. Each variable, correlation with itself is 1.000, which indicates an ideal correlation as would be anticipated. There are some surprising patterns when we look at the correlation between different path wise comparisons of variables. The association between financial distress and budget deficit is positively correlated with each other, statistically the relationship is significant. The relation of fiscal policy and monetary policy is positive and significant correlation with financial distress and balance of payment is negative but significant correlation. The political instability is high correlation with financial distress and gross domestic product and corruption is low and insignificant correlation. The correlation among financial distress and inflation is (-0.167715), which is negative but significant.

The budget deficit and fiscal policy is positive and significant correlation, while balance of payment, monetary policy and gross domestic product is negative correlation with budget deficit. The correlation among inflation is positive and significant relation and political instability and corruption is negative and low correlation. The correlation among balance of payment and fiscal policy is negative and significant relationship. The gross domestic product and political instability is positively correlated with balance of payment and monetary policy is negative correlation with balance of payment. The correlation among fiscal policy and gross domestic is negative but significant correlation but the monetary policy is negative and insignificant correlation with fiscal policy. The correlation among fiscal policy and corruption positively correlated and significant while the political instability and inflation is negative and insignificant correlation.

Table 2: CORRELATION MATRIX OF DEVELOPED ECONOMIES

Variables	FD	BD	BOP	FP	MP	GDP	PI	COR	INF
FD	1.000000								
BD	0.156861	1.000000							
BOP	-0.146275	-0.089551*	1.000000						
FP	0.111997	0.614569	-0.117021	1.000000					
MP	0.242009	-0.132560	-0.349972	-0.086788*	1.000000				
GDP	-0.0562***	-0.0048***	0.05867***	-0.042035	-***0.1583	1.000000			
PI	-0.102967	-0.111215	0.121819	-0.0150***	-0.254368	0.053514***	1.00000		
COR	-0.0185***	-0.378823	0.280342	0.092486*	-0.113723	0.02612***	0.502305	1.000000	
INF	-0.167715	0.088657*	-0.269832	-0.0040***	0.097039*	0.237975	0.02055***	-0.16317	1.000000

*, **, ***, represents significant 1 percent, 5 percent and 10 percent respectively.

The results show that the correlation among monetary policy and gross domestic product is negative and insignificant. The correlation between monetary policy with inflation shows high correlation and political instability and corruption shows the low correlation. The correlation of gross domestic product with these variables are positive and significant except corruption which is positive but insignificant with gross domestic product. The correlation among political instability and corruption is positive and significant. The relation between political instability and inflation is positive and insignificant. The correlation among corruption and inflation is negative

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association, statistically the relationship is significant. Overall, the correlation matrix highlights the budget deficit, balance of payment, fiscal policy, monetary policy, gross domestic product, political instability, corruption and inflation offers light on probable links between the variable. Since correlation does not imply causation, further research is needed to show casual relationships between these components.

The estimated outcomes of panel unit root tests are presented in table 3. The estimated outcomes show that there is the same order integration among the variables of the model, which is the most suitable situation to apply panel least square and fixed or random effect models.

Table 3: PANEL UNIT ROOT TEST OF DEVELOPED ECONOMIES

Variables	At first difference without time trend			
	LLC	IPS	ADF-Fisher	PP-Fisher
FD	-9.11015***	-10.2879***	206.24***	623.663***
BD	-9.04087***	-9.62905***	192.569***	651.572***
BOP	-8.27511***	-10.201***	207.346***	395.217***
FP	-1.11586***	-1.20916***	65.4415***	78.4943***
MP	-4.66316***	-7.04846***	148.179***	259.270***
GDP	-7.5316***	-15.7376***	313.337***	1453.01***
PI	-9.79033***	-12.1641***	242.292***	549.682***
COR	-5.38866***	-7.90374***	165.271***	347.527***
INF	-9.59293***	-12.9613***	259.187***	769.801***
	At first difference with time trend			
FD	-7.18389***	-7.4258***	151.428***	289.493***
BD	-6.68653***	-6.31273***	132.280***	292.209***
BOP	-7.11914***	-7.45712***	155.584***	284.491***
FP	-4.10038***	-5.39371***	118.530***	267.209***
MP	-3.27741***	-4.68843***	110.860***	207.226***
GDP	-4.36788***	-11.561***	219.233***	528.732***
PI	-7.7284***	-9.51394***	185.467***	439.843***
COR	-3.67497***	-5.30317***	120.394***	272.262***
INF	-7.77082***	-9.89057***	191.538***	421.619***

Note: ***, ** and * denote 1%, 5% and 10% level of significance.

To find the impact of explanatory variables on dependent variable, this study has applied panel least squares. The results of panel least square have been given in table 4, the findings indicate in developed economies, the budget deficit and financial distress are positively and highly significant (p = 0.0000) with each other. The findings indicate that 1 percent increase in budget deficit results in a 1.157697 percent increase in financial distress. The findings demonstrate that balance of payment has negative but significant (p = 0.0016) impact on financial distress in developed economies. The 1 percent change in balance of payment results in a 0.502871 percent decrease in financial distress. The findings indicate that fiscal policy has insignificant (p = 0.1191) and negative relation with financial distress. According to the estimations, a 1 percent change in fiscal policy decrease the 0.401867 percent of the financial distress. The findings indicate that the positive and highly significant (p = 0.0000) relationship between monetary policy and financial distress. According to the coefficient, an increase in monetary policy by 1 percent increase cause the increase in financial distress by 1.232366. The findings show that gross domestic products have a positive but insignificant (p = 0.2551) influence on financial distress in developed countries. The results indicate that 1 percent change in GDP cause the 0.285421 percent increase in financial distress.

The findings shows that political instability have insignificant (p = 0.1446) and negative impact on financial distress. The findings elaborate that 1 percent increase in political instability cause the 3.082071 percent decrease

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in financial distress. The findings show that corruption has significant (p = 0.0037) and highly positive relation with financial distress, with the 1 percent increase in corruption the financial distress will increase the 5.444299. The findings show that inflation has significant (p = 0.0000) but negative relation with financial distress. The estimated results elaborate that the 1 percent increase in inflation cause the 1.927190 percent decrease in financial distress. The results of the variables show the relation between dependent and independent variables and also explain the significance level between the variables.

Lagrange multiplier test is used to estimate the effects specifications, by using this test we estimate that we need to use both cross section and time period same nature or different. If the probability value of the both are significant, we will use the same specification but if one value is significant and other is not, we will use the significant value nature is fixed or random and other is non. According to the results in table 5 both the values of cross section (0.0000) and time period (0.0302) are significant, so the same effects specification will be applied.

Table 4: PANEL LEAST SQUARE OF DEVELOPED ECONOMIES

Dependent Variable: FD				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
BD	1.157697	0.232994	4.968794	0.0000
BOP	-0.502871	0.158927	-3.164155	0.0016
FP	-0.401867	0.257413	-1.561177	0.1191
MP	1.232366	0.216510	5.691971	0.0000
GDP	0.285421	0.250542	1.139216	0.2551
PI	-3.082071	2.109781	-1.460848	0.1446
COR	5.444299	1.866940	2.916161	0.0037
INF	-1.927190	0.345218	-5.582532	0.0000
C	-0.209623	4.554390	-0.046027	0.9633
R-squared	0.164711	Mean dependent var		15.19141
Adjusted R-squared	0.152126	S.D. dependent var		23.73396
S.E. of regression	21.85425	Akaike info criterion		9.023194
Sum squared resid	253609.9	Schwarz criterion		9.094720
Log likelihood	-2427.262	Hannan-Quinn criter.		9.051168
F-statistic	13.08848	Durbin-Watson stat		0.186006
Prob(F-statistic)	0.000000			

Table 5: LAGRANGE MULTIPLIER TESTS FOR RANDOM EFFECTS OF DEVELOPED ECONOMIES

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives			
	Cross-section	Time	Both
Breusch-Pagan	1871.235	4.699506	1875.934
	(0.0000)	(0.0302)	(0.0000)

To determine the "appropriate model for estimating the panel data—whether to use fixed effects or random effects the Hausman test was conducted. The results are summarized in Table 6. This test specifically assesses the correlation between the independent variables and the random effects (unobserved heterogeneity). According to the test summary, the p-value is 0.0000, and the Chi-Square statistic is 48.543465 with 8 degrees of freedom (d.f). Because the p-value is less than the standard significance level of 0.05, we reject the null hypothesis that there is no relationship between the random effects and the independent variables. This suggests a connection between the independent variables and unobserved heterogeneity (cross-section random effects). Therefore, the analysis

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supports using a fixed effects model rather than a random effects model, as the former accounts for the observed association, leading to more accurate estimates" and conclusions.

Table 6: OUTCOMES OF HAUSMAN TEST

Equation: Untitled

Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section and period random	48.543465	8	0.0000

The estimated outcomes from the fixed effect model are presented in table 7. The results reveal that in developed economies, there exists a significant negative relationship between budget deficits and financial distress. Specifically, a 1 percent increase in budget deficit correlates with a -0.899137 percent decrease in financial distress. The analysis further indicates that the balance of payments has a positive but statistically insignificant impact on financial distress, with a 1 percent change resulting in a 0.110467 percent increase. Fiscal policy shows an insignificant positive association with financial distress, where a 1 percent change in fiscal policy is linked to a 0.772996 percent rise in financial distress. Conversely, monetary policy exhibits a highly significant positive relationship with financial distress, as a 1 percent increase in monetary policy leads to a 1.242289 percent increase in financial distress.

Table 7: FIXED EFFECT MODEL OF DEVELOPED ECONOMIES

	Dependent Variable: FD			
Variable	Coefficient	Std. Error	t-Statistic	Prob.
BD	-0.869137	0.437784	-1.985310	0.0477
BOP	0.110467	0.145140	0.761108	0.4470
FP	0.772996	0.573459	1.347953	0.1783
MP	1.242289	0.247005	5.029417	0.0000
GDP	-0.252045	0.218085	-1.155716	0.2484
PI	0.788142	3.401322	0.231716	0.8169
COR	9.033491	3.775755	2.392499	0.0171
INF	0.254750	0.282990	0.900210	0.3685
C	-9.577351	10.72142	-0.8932910.3721	

Additionally, gross domestic product (GDP) demonstrates a substantial negative effect on financial distress in developed nations, with a 1 percent change in GDP corresponding to a -0.252045 percent reduction in financial distress. Political instability shows an insignificant but positive impact on financial distress, with a 1 percent increase in political instability associated with a 0.788142 percent rise in financial distress. Notably, corruption exhibits a highly significant and strongly positive relationship with financial distress, where a 1 percent increase in corruption results in a staggering 9.033491 percent increase in financial distress. Inflation, on the other hand, shows an insignificant positive relationship, with a 1 percent increase in inflation causing a 0.254750 percent increase in financial distress. Comparing the coefficients between the fixed effect model and the panel least squares model reveals inconsistencies in the results for various variables. While both models confirm that monetary policy and corruption have statistically significant positive relationships with financial distress, the direction and significance of the other variables budget deficit, balance of payments, fiscal policy, political instability, and inflation differ between the models. This discrepancy suggests that the influence of these factors on financial distress varies depending on the econometric approach used.

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CONCLUSIONS

The findings from this study offer critical insights into the relationship between various national factors and financial distress in developed economies. In developed nations, the study reveals that budget deficits negatively and significantly affect financial distress. This suggests that excessive government spending or revenue shortfalls can lead to increased borrowing and potential debt crises, undermining investor confidence, raising borrowing costs, and hindering economic growth. This, in turn, exacerbates financial distress. On the other hand, the balance of payments in developed countries shows a positive but insignificant impact on financial distress. This implies that while capital inflows might not directly impact overall financial health, their effects could be mitigated by domestic fiscal policies, structural issues, or global economic conditions. Fiscal policy in these nations has a positive but insignificant effect on financial distress, potentially due to structural weaknesses or ineffective transmission mechanisms that limit its impact. Additionally, if fiscal measures are not aligned with broader economic objectives or are hindered by political constraints, their effectiveness in reducing financial distress may be limited. Conversely, monetary policy has a positive and highly significant impact on financial distress. By reducing borrowing costs, stimulating investment, and boosting consumer spending, monetary policy plays a crucial role in mitigating financial distress. Central banks' measures, such as interest rate cuts and quantitative easing, provide essential liquidity support and stabilize financial markets during periods of distress.

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