

# Macroeconomic and institutional determinants of financialisation of non-financial firms: Case study of Turkey

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We observe that industrial firms in Turkey have shifted substantial amounts of working capital from production activities to the purchase of high-yield interest-bearing assets, most notably public bonds, to ensure immediate short-term interest revenues. Introducing the new and historical institutional literatures to the financialisation research, this article empirically examines the influences of macroeconomic and institutional factors on non-financial firms' financialisation behaviour for the period 1990–2002. The findings from panel regression analyses using data from 41 firms listed on the Istanbul Stock Exchange indicate that both macroeconomic and institutional factors influence financialisation behaviour to different degrees. Turkish non-financial firms particularly engage in financialisation as a response to highly uncertain macroeconomic conditions. The findings indicate that the key characteristics of state-organised business system in Turkey, such as firms' ties with the government and family ownership, are not conducive to financialisation behaviour.

**Keywords:** economic development, financialisation, institutional political economy, firms

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## 1. Introduction

An industrial firm holding financial assets may use them in fixed investments or reinvest them in financial instruments. The relation between real (i.e., non-financial) sector firms and financial markets has intensified over the past three decades mainly due to liberalisation of the financial markets at a global scale. Diversion of internal funds towards financial instruments rather than accumulation of fixed capital is predicated by the term 'financialisation'. Orhangazi (2008a,

p. 3) points out that there is no clear and agreed-on definition of the term 'financialisation', and its use has been ambiguous. In addition, Stockhammer (2010) emphasises that financialisation encompasses a wide range of issues related to non-financial firms and households. In general, broader definitions of 'financialisation' relate to growing importance of the financial sector in the economy, and narrower definitions relate to increasing importance of financial investments as a revenue-generating activity for non-financial firms. For the purpose of this research, we adopt the narrow definition. Since the 1970s, non-financial firms, especially in the United States, responded to increasing profit opportunities in financial investments by allocating more of their funds towards financial investments and thus reducing their fixed investment spending (Orhangazi, 2008a, pp. 30–36). Financialisation in developed countries in this sense was facilitated by financial liberalisation and the deepening of financial markets. The ratio of portfolio income to cash flow for non-financial firms in the United States rose from only 14% in the 1960s to 37% by the end of the 1990s (Demir, 2009).

Since the early 1980s, there has been a growing concern for increasing financialisation of non-financial firms in both developing and developed economies. This process came at a time when profit rates for fixed investments declined substantially and the availability of the funds for fixed investments were limited (Dumenil and Levy, 2004; Crotty, 2005). In developing economies, financial liberalisations during the 1980s and 1990s resulted in macroeconomic uncertainties and risks, which were reinforced by structural problems inherent in their institutional frameworks that limit the capability to channel funds to productive investments, such as imperfect capital markets and the resulting restrictions on loans, and high risks involving high real interest rates. Coupled with the availability of new financial instruments as a result of innovations, these problems led the developing country non-financial firms to increase short-term financial investments rather than long-term fixed investments. One of the most important of these financial investments in developing countries is government debt, which paid high and risk-free rates of return due to large borrowing requirements. Demir (2009) argues that this behaviour of non-financial firms is by no means irrational considering the high risks involved with the alternative, that is, long-term fixed investments.

Recent studies have examined the effect of financialisation of non-financial firms both theoretically and empirically. Along with descriptive studies examining financialisation from corporate governance and political economy perspectives (see Erturk et al., 2008, for a collection of such papers), some recent empirical work has also investigated the effects of financialisation quantitatively as well (Stockhammer, 2004; Orhangazi, 2008b; Demir, 2009). The motives that lead non-financial firms to increase financial investments to the detriment of real (fixed) investments are different. In developing countries, macroeconomic risk

and uncertainty act as the main driver (Demir, 2009), whereas in developed countries it is the institutional changes in corporate governance as reflected in the so-called shareholder value revolution (Orhangazi, 2008b). In both cases, firms have to make an optimum portfolio choice between financial and fixed investments. These studies used different versions of investment models and concluded that financialisation impacted negatively on the accumulation of fixed capital.

In this article, we aim to extend the financialisation literature, particularly in the developing country context, in two ways: first by integrating 'institutional effects' and employing new institutional theory and historical institutionalism, and second by investigating the determinants (causes) of financialisation, rather than the effects. Our main argument is that financialisation behaviour of non-financial firms can be better explained by considering both macroeconomic and institutional factors. The expanding literature has examined the effect of financialisation on investment decisions of firms by taking into account macroeconomic variables, market conditions, and the governance structure of firms, that is, different interest groups within the firms. In the new institutional theory, it is argued that organisations frequently adopt rule-like organisational practices and behaviours that are institutionalised and widely accepted by other organisations in their respective business systems (Powell and DiMaggio, 1991). The result is isomorphism amongst the behaviours of firms due to common social, political, and cultural rules and institutions of the economy, and due to responses to uncertainty (DiMaggio and Powell, 1983, p. 150; Whitley, 1994; Campbell, 2004).

Using our definition of financialisation, that is, increasing importance of financial investments as a revenue-generating activity for non-financial firms, we show that non-financial firms in Turkey have financialised especially during the 1990s, which was characterised by macroeconomic uncertainty. We then attempt to explain how the state-organised business system, exemplified by the Turkish business environment, constrained and facilitated financialisation. By doing so, we contribute to the literature by expanding the explanations of financialisation to political, economic, and institutional characteristics. Adopting this integrative approach, we develop a series of hypotheses to examine institutional and macroeconomic underpinnings of financialisation in Turkey. We choose Turkey as the proper case because studies on the Turkish business environment indicate that financialisation has been an institutionalised behaviour amongst large Turkish firms (Buğra, 1990, 1994; Öniş, 1994; Özen and Akkemik, 2012). Turkish entrepreneurs have invested in real estate, public bonds, stocks, and foreign exchange during the course of economic liberalisation since the 1980s. Demir (2009) showed that the average ratio of financial revenues in total profits of the top 500 manufacturing firms in Turkey rose from 23% in 1982 to 112% in 2002. He also showed that the share of financial assets in profits of

industrial firms in Turkey was higher than Argentine and Mexican firms. Although increasing purchases of public bonds by large firms are justified by their motivation to hedge against risks arising from macroeconomic instability, this was severely criticised as rent-seeking behaviour by [Buğra \(1994, p. 223\)](#) and [Boratav, Yeldan, and Köse \(2000\)](#), who found evidence for the government's deliberate protection of large private firms from the adverse effects of economic uncertainty.

On the analytical side, we examine the institutional and macroeconomic determinants of financialisation in Turkey. We argue that the institutional characteristics of the Turkish business environment—that is, organisational ties with the government, family ownership, and non-unionised labour force—facilitated financialisation. We also demonstrate that macroeconomic factors—the gap between returns to real and financial investments, the real exchange rate, and business cycles—are influential on financialisation. The empirical approach of this article is comparable to [Orhangazi \(2008b\)](#) and [Demir \(2009\)](#). The novelty of the empirical part of this work is that we examine the causes of financialisation, whereas most of the empirical papers in the financialisation literature deal with its effects. Using firm-level data for a sample of publicly listed Turkish industrial firms for the period 1990–2002, we investigate the influence of a set of institutional and macroeconomic factors on financialisation using panel regressions.

The article is organised into three parts. We set up the theoretical framework of the study in section 2. In the third section, we explain the method of analysis and the data. Empirical findings are reported in section 4. We conclude by discussing the findings and the implications of the study for the relevant literature in section 5.

## 2. Theoretical background and hypotheses

### 2.1 *Financialisation: Review of the literature*

Financialisation has recently become an attractive research topic, but a general definition of this concept is still non-existent. [Orhangazi \(2008a, pp. 3–6\)](#) lists various definitions of this term. For the purpose of this article, we adopt his definition of financialisation for non-financial firms: 'increase in financial investments and hence financial incomes of non-financial companies and the increasing payments to financial markets' ([Orhangazi, 2008a, p. 11](#)), because it fits our analytical framework best. In this section, we provide a brief overview of the literature on financialisation starting with implications from early works by Keynes and Tobin.<sup>1</sup>

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<sup>1</sup>For a comprehensive overview of the issues around financialisation and a detailed literature review, see [Orhangazi \(2008a, pp. 3–10 and 41–78\)](#).

The firm's choice between fixed and financial investments has been examined by Keynes and Tobin. Early works focussed on the role of physical capital accumulation by industrial firms and the role of the financial sector. Keynes particularly dealt with financial investments by industrial firms (Lawson and Lawson, 1994, pp. 5–6; Erturk, 2005). Along with the development of markets for a wide range of financial instruments, financialisation became an alternative way of accumulating wealth for industrial firms. Keynes argued that industrial firms become increasingly tempted to retain their accumulated financial capital for financial returns (Minsky, 2008, p. 118).<sup>2</sup> In this case, financial investments become a substitute for investments in physical capital, an issue argued also by Tobin (1965), who emphasised crowding out of fixed investments by financial investments due to the portfolio choice problem. Tobin stressed the role of public debt as a revenue-generating activity for industrial firms. Similarly, according to Tornell (1990), uncertainty leads to 'reversible' financial investments. Furthermore, Boyer (2000) emphasised that financialisation restricts fixed investments by making it more expensive to raise capital from financial markets.

Financialisation and its effects on the economy are assessed from different perspectives. We focus on those assessing from the corporate governance and macro-economic perspectives.<sup>3</sup> Most studies on developed economies (the United States in particular) link financialisation with changing corporate governance and management practices prioritising the maximisation of shareholder value throughout the 1980s and 1990s (e.g., Aglietta, 2000; Lazonick and O'Sullivan, 2000; Baker, Powell, and Veit, 2003).<sup>4</sup> Non-financial firms transferred substantial amount of earnings to financial markets especially in the form of dividend payments and stock buybacks.<sup>5</sup> These firms first transfer large amounts of earnings to financial markets and then compete with each other to acquire these funds, which Froud,

<sup>2</sup>In *A Treatise on Money*, Keynes distinguishes between 'industrial circulation' and 'financial circulation' of accumulated financial capital. The former relates to holdings of financial capital for production-related transactions, and the latter relates to financial investments. Keynes argues that when the peak of a business cycle is reached, credit squeeze occurs as investors become reluctant to supply funds for long-term productive investments and resort to short-run safe liquid assets (Lawson and Lawson, 1994, p. 6).

<sup>3</sup>In another study not directly comparable to financialisation studies, Arza and Espanol (2005) classified firms according to Minsky's taxonomy to distinguish between speculative and entrepreneurial behaviour and found evidence for increasing speculative behaviour in Argentina during financial liberalisation.

<sup>4</sup>For an analysis of the shareholder value approach versus stakeholder values in the global food sector, see Jones and Nisbet (2011).

<sup>5</sup>Lazonick and O'Sullivan (2000) argue that stock buybacks led to a shift of corporate governance ideology from 'retain and reinvest' to 'downsize and distribute'.

Johal, and William (2000) call ‘coupon pool capitalism’. This process increases uncertainty and shortens the planning horizon for investment funding.<sup>6</sup> Lazonick and O’Sullivan (2000) and Dobbin and Zorn (2005) argue that managers became more interested in distributing the revenues of the corporation in a way that raises stock prices and stock options as a result of the hostile takeovers in the 1980s and the ‘shareholder value’ revolution of the 1990s. Furthermore, hostile takeovers and the shareholder revolution reflect the changes in corporate governance that led managers to spare more resources for financial investments (Lazonick and O’Sullivan, 2000; Aglietta and Breton, 2001; Dumenil and Levy, 2004; Orhangazi, 2008b). Hostile takeovers were made possible by the development of new financial instruments after the late 1970s. Shareholder revolution, on the other hand, led managers—previously long-term and growth-oriented—to become more short-term and profit-oriented and adopt decisions closer to shareholders’ preferences, which stress profitability rather than fixed investments (Stockhammer, 2004).

With regards to the corporate governance perspective, Stockhammer (2004) built a model based on the separation between ownership and control, which helps understand the objective of the firm. Mentioning the post-Keynesian theory of the firm, he argued that the firm has more goals than profit maximisation, namely, growth and raising the market share, and the institutional environment determines which goal dominates.<sup>7</sup>

Those studies assessing financialisation and its implications for the economy from the macroeconomic perspective mostly deal with developing economies. Financialisation in developing economies is thought to be facilitated by liberalisation of the financial markets (especially after the late 1980s), which is also held

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<sup>6</sup>Froud, Johal, and William (2000, p. 275) state that coupon pool capitalism in the United States and the United Kingdom is constituted when the capital market moves from intermediation (Ndikumana, 2005, pp. 655–56) to regulation of firm and household behaviour. As argued by Baker, Powell, and Veit (2003), stock buybacks may have important reasons related to corporate governance, such as signaling (buyback may signal that the existing stock is undervalued and hence provides information about managerial efficiency), agency costs of free cash flows (when paying dividends the firm reduces agency costs related to over-investing or investing in non-productive investments), and capital market allocation (with stock buybacks, shareholders may allocate these funds more efficiently than managers do).

<sup>7</sup>Stockhammer’s model is based on an internal power structure in which managers may have different objectives than owners do. Although owners are interested in dividends and share prices, managers are more interested in obtaining power, and this may be reflected in high market shares and rapid growth. Thus, managers’ utility depends on growth and owners’ utility depends on profits. Therefore, the firm makes a choice between growth and profits. The existence of a market for corporate control and performance-related pay schemes lead managers to adopt a management policy closer to shareholders’ preferences. If the firm faces a trade-off between profits and growth, this leads to lower fixed investments.

responsible for macroeconomic instability and the shift of financial resources (bank-allocated loans, in particular) by non-financial firms towards short-term financial investments (e.g., Demir, 2009).

## 2.2 Macroeconomic determinants of financialisation in Turkey

In this section we investigate the determinants of financialisation behaviour of non-financial firms in Turkey. We previously emphasised that the literature examines the implications of financialisation from two perspectives: corporate governance and macroeconomics. In the same fashion, we elaborate on the determinants of financialisation from the macroeconomic perspective in this subsection and examine the institutional determinants, including those related to corporate governance, in the next subsection. We develop our arguments in the form of hypotheses and explain the rationale them in turn.

*Hypothesis 1: Higher rates of return to financial investments compared to real investments enhance firms' financialisation.*

Since the early 1980s, Turkey has been implementing an ongoing liberalisation strategy with the aim of reducing the role of the state in the economy. According to Öniş (1991), the Turkish experience with liberalisation during the 1980s had an unorthodox nature in the sense that a series of measures was accompanied by an ambitious growth strategy based on the expansion of the public sector. This paradox led to increasingly high inflation rates that averaged 51%, large borrowing requirements for the government that averaged 5% of GDP, and external debt that averaged 39% of GDP during the 1980s (Table 1).<sup>8</sup> To finance the budget deficits and the losses of the state-owned economic enterprises, the government adhered to domestic borrowing by issuing public bonds in the Istanbul Stock Exchange (ISE), which was founded in 1986. Around 90% of total securities issued by the ISE were public sector issues in 1988 (Öniş, 1992, p. 13). The domestic borrowing policy continued throughout the 1990s when the economy was confronted with the predominantly negative side of financial globalisation, including over-dependence on short-term capital flows, foreign speculation, and recurrent financial crises (Alper and Öniş, 2003). Thus, the public sector borrowing requirement averaged 9% of GDP and the average inflation rate was 77% during the 1990s. The public sector borrowing requirement as a percentage of GDP reached 10% in 1993, prior to the 1994 crisis, and to an extremely high level (15%) in 1999. Another crisis hit the Turkish economy in 2001, after the

<sup>8</sup>The public sector borrowing requirement is a rough measure of budget deficit in Turkey and refers to excess of public expenditures over public revenues. Here, "public" refers to central government, local governments, state-owned enterprises, and social security funds.

**Table 1.** Macro indicators of Turkish economy during 1980–2005

	Inflation rate for consumer prices (%)	12-month bond rate (%)	GNP growth rate (%)	Real effective exchange rate (1995 = 100)	PSBR / GDP (%)	External debt / GDP (%)
1980	110.2	–	–2.8	141.1	8.8	–
1981	36.6	–	4.8	131.1	4.0	–
1982	30.8	–	3.1	129.0	3.5	–
1983	31.4	–	4.2	127.0	4.9	29.6
1984	48.4	–	7.1	127.5	5.4	34.0
1985	45.0	–	4.3	116.5	3.6	37.4
1986	34.6	–	6.8	95.9	3.7	42.0
1987	38.8	–	9.8	93.3	6.1	46.1
1988	73.7	–	1.5	85.3	4.8	44.8
1989	63.3	53.9	1.6	106.5	5.3	38.4
1990	60.3	49.7	9.4	117.0	7.3	32.2
1991	66.0	69.8	0.3	112.9	9.9	33.2
1992	70.1	74.6	6.4	114.9	10.5	34.6
1993	66.1	79.3	8.1	125.7	10.2	37.0
1994	106.3	109.9	–6.1	95.7	6.2	49.6
1995	88.1	98.9	8.0	103.1	5.0	43.1
1996	80.3	107.8	7.1	101.7	8.6	43.2
1997	85.7	110.7	8.3	115.9	7.7	43.8
1998	84.6	102.0	3.9	120.9	9.4	46.7
1999	64.9	94.0	–6.1	127.3	15.6	55.6
2000	54.9	36.6	6.3	147.6	11.8	59.3
2001	54.4	75.9	–9.5	116.3	16.4	78.0
2002	45.0	56.0	7.9	125.4	12.7	72.0
2003	25.3	42.7	5.9	140.6	9.4	60.7
2004	10.6	24.8	9.9	143.2	4.7	53.8
2005	8.2	16.6	7.6	171.4	–0.3	47.0
2006	9.6	17.5	6.1	160.1	–2.0	49.9

Note: PSBR: public sector borrowing requirement.

Source: Central Bank of the Republic of Turkey Data Dissemination Service, State Planning Office *Economic and Social Indicators 1950–2006*.

collapse of the disinflation and stabilisation program under the auspices of the International Monetary Fund (IMF), devaluing the domestic currency by 40%.

Macroeconomic instability during the course of liberalisation in Turkey seems to have encouraged some institutionalised firm behaviour. For instance, big businesses continued their rent-seeking behaviour to gain tax rebates from exporting through their particularistic relations with the government, which provided a set of incentives for exports during the 1980s (Öniş, 1991). According to Boratav, Yeldan, and Köse (2000), the government financed private firms to make them finance public expenditures throughout the 1990s. They argue that this was a populist policy that favoured the interests of big enterprises against those of



labour in an unstable macroeconomic environment. Therefore, they assert that this policy fed ‘speculative rentier type of capital accumulation’ by firms that acted partly as rentiers and partly as borrower-industrialists. Kaplan, Özmen, and Yalçın (2006) argued that due to high inflation and macroeconomic instability, the maturity of financial contracts (including government bonds and time deposits) were short, and non-financial firms were able to hedge themselves against the currency risk largely due to high levels of dollarisation (at times reaching up to 50% of the value of total deposits) in the Turkish banking system. Demir (2009) argues that non-financial firms bought debt securities via repurchase agreements intermediated by banks. During the same time, operating profitability in Turkey declined from 25% in 1994 to less than 4% in 2003 (Demir, 2009). Put differently, while financial investments of non-financial firms were increasing, returns to their fixed investments were declining, creating a rate of return gap favouring financial investments. It can be argued, then, that part of real investments must have been driven out by financial investments. Based on these macroeconomic developments and from a macroeconomic perspective, we argue that the higher rate of return gap between financial and real investments and higher real exchange rates facilitated financialisation.

*Hypothesis 2: Positive demand expectations affect financialisation negatively.*

Stockhammer (2008) argues that financialisation leads to more volatility in macroeconomic variables, such as output growth, for two reasons: (1) macroeconomic shocks, especially those originating from the financial sector, lead to highly volatile prices and hence overshooting (for the exchange rate in particular) becomes widespread in the financial markets; and (2) financialisation leads to higher debt levels by households, which in turn leads to fragility in the economy. The former is directly related to the Turkish experience of financialisation, especially during the 1990s.

The Turkish economy was highly exposed to macroeconomic shocks and uncertainties during the 1990s as evident from declining economic growth rates and high inflation and interest rates. After adding the government’s high borrowing requirements, an important end result of such adverse macroeconomic conditions was a rise in domestic interest rates, especially of government securities. As a response to uncertain macroeconomic conditions in the stated period, it is well known that Turkish non-financial firms shifted substantial amounts of resources to financial investments in government securities (Alper and Öniş, 2003, p. 9).<sup>9</sup> An Istanbul

<sup>9</sup>On the other hand, the causal relation from uncertain macroeconomic conditions to financialisation may or may not necessarily hold in the opposite direction. This issue is beyond the scope of this article, as we are focussing on the causes of financialisation but not the consequences. The large literature on financialisation discusses this issue in depth.

Chamber of Industry report revealed that the average ratio of non-operating revenues to operating profits in the balance sheets of the top 500 industrial firms was only 19.6% in 1983, but rose to 33.3% in 1990, 54.4% in 1994, and 87.7% in 1999 (ISO, 1999). This inclination of Turkish non-financial firms towards financialisation behaviour under uncertain macroeconomic conditions implies that current macroeconomic conditions that reflect the performance of the economy, which we operationalise with the economic growth rate and the position of the economy on the business cycle (i.e., whether the economy is experiencing a boom, recovery, or recession), may explain financialisation. To put it more precisely, increasing aggregate demand during a boom should lead to a rise in fixed investments as a result of positive expectations of aggregate demand, which in turn may be expected to encourage fixed investments rather than financial investments.

### 2.3 *Institutional determinants of Financialisation behaviour*

Here we investigate the institutional determinants of financialisation in Turkey by developing a series of hypotheses. Because distinct institutional arrangements govern economic activities—as argued by historical institutionalists such as Hamilton and Biggart (1988), Hall and Soskice (2001), and Whitley (1999)—we emphasise the peculiarities of the Turkish business system in devising the hypotheses. Business systems are distinctive patterns of economic organisation that vary in degree and mode of authoritative coordination of economic activities at the national level (Whitley, 1999, p. 33). The Turkish institutional environment best fits the ‘state-organized business system’ the best (Gökşen and Üsdiken, 2001).<sup>10</sup> In the state-organised business system (1) the economy is dominated by vertically and horizontally diversified large firms, (2) a unified administrative apparatus is directly controlled by families or small number of partners, (3) the state financially supports and nurtures firms, and (4) horizontal linkages between economic actors and employer–employee interdependence are limited but vertical dependence on the state is strong.<sup>11</sup> Following Whitley (1999), we argue that the extent of owners’ direct involvement in managing business and the degree of delegation to and trust of employees in organising work in industrial relations are among important features that identify business systems. Accordingly, we include in our theoretical framework institutional factors that represent the institutional dynamics of the Turkish business system, that is, firms’ ties with the government, family ownership, and non-unionisation.

<sup>10</sup>See Whitley (1999) for details on other business systems (i.e., fragmented, coordinated industrial districts, compartmentalised, collaborative, and highly coordinated).

<sup>11</sup>Whitley (1999) raises Korea as an example of state-organised business system in which both vertically and horizontally diversified large family holdings are nurtured by the state.

*Hypothesis 3: Firms at the center (TUSIAD members) are more inclined to financialisation.*

In the Turkish business system, the state creates both uncertainties and opportunities due to its enduring characteristics, such as (1) weakness in policy-making, (2) arbitrary interventions according to the requirements of daily politics (i.e., neopatrimonialism), and (3) preferential treatment of privileged business groups by political patronage (i.e., clientelism) (Özen and Akkemik, 2012). Although which business groups to be privileged depends on the political party in power, the biggest business groups organised around the Association of Turkish Businessmen and Industrialists (TUSIAD) have had particularistic relations with political and bureaucratic elites.

It is important to remember that the Turkish business system carries the characteristics of the state-organised business system, such as strong ties between business organisations and the state rather than horizontal linkages between firms (Whitley, 1999). Therefore, as can be expected, a dual structure emerges within both political and economic spheres where the center represents the ruling elites and their associated big business class and the periphery represents less powerful social groups and less privileged business enterprises (Shils, 1961; Eisenstadt, 1978). In a similar fashion, we argue that the Turkish business system has a dual structure wherein the center is represented by large family-owned business groups nurtured by the state since the 1920s and organized around TUSIAD, as shown by Buğra (1994). Through their particularistic relations with the bureaucratic and political elites, TUSIAD member firms may have been favoured relatively more as compared to other firms outside the center when the state created profitable opportunities for financial investments. This is especially important if we consider that the state held a dominant position in the financial market throughout most of the 1980s and 1990s and public debt financed through public bonds amounted to extraordinarily large volumes during the same period.

*Hypothesis 4: Firms with greater owning-family discretion are more inclined to financialisation.*

Another key characteristic of the state-organised business system is that the large business groups as the main economic actors are directly controlled by families or small number of partners. This organisational ownership structure may influence financialization. Géczy, Minton, and Schrand (2007) showed that firms with ownership structures that allow greater managerial power and fewer shareholder rights are more likely to channel financial funds towards financial investments rather than investments in fixed capital. It becomes easier for managers' to shift financial resources of the firm towards financialisation when they

enjoy greater discretion in decision-making. In Turkey, although there are partnerships between different families or between families and foreign companies or state-owned enterprises, most firms are directly managed by owning families, even those that are publicly listed (Yurtoglu, 2003). Naturally, we argue that as the number of partners decreases, firms are more inclined to financialisation because the managerial discretion needed for financialisation is less dispersed.

*Hypothesis 5: Firms with non-unionised labour are more inclined to financialisation.*

Another institutional characteristic of the state-organised business system is lower levels of unionisation and weak labour unions mostly controlled by the state (Whitley, 1999, p. 62). We argue that the labour union existence in industrial firms is influential on financialisation behaviour. The new institutional theory suggests that organisations have to conform to legal and normative requirements imposed by stakeholders to be deemed legitimate (Meyer and Rowan, 1977). This implies that the interests of the stakeholders would be satisfied. One of the most important stakeholders in this regard is the labour union, which is not well recognised in the relevant literature. Shifting financial resources earned from productive activities to financial investments is likely to reduce production and investments and lead to downsizing. This is reflected in the shift from ‘retain and reinvest’ to ‘downsize and distribute’ strategies of the non-financial firms in the United States after the shareholder-value revolution, as put forward by Lazonick and O’Sullivan (2000). With the shift of managerial focus towards financial investments and away from real (productive) activities, this is likely to hurt the workers due to the expected pressure on managers for downsizing. Naturally, one expects labour unions to resist to such manager behaviour. Therefore, Hypothesis 5 puts labour unions into question when analysing financialisation.

### 3. Data and method of analysis

#### 3.1 Model specification

Previous econometric models examining the financialisation behaviour of firms used portfolio choice models where real investment was the dependent variable and revenues from financial investments and a series of macroeconomic variables (e.g., rate of return gap between fixed and financial investments, capacity utilisation rate, risk, debt ratio) were independent variables (Stockhammer, 2004; Orhangazi, 2008b; Demir, 2009). We take a different approach and run a model in which the financialisation variable is the dependent variable and various macroeconomic and institutional variables are regressed on it. In doing this, we test the hypotheses listed in Table 2, which were developed in Section 2.

**Table 2.** List of hypotheses

Hypothesis	Explanation
Hypothesis 1	Higher rates of return to financial investments compared to real investments enhance firms' financialization
Hypothesis 2	Positive demand expectations impact on financialization negatively
Hypothesis 3	Firms at the center (TUSIAD members) are more inclined to financialization
Hypothesis 4	Firms with greater owning-family discretion are more inclined to financialization
Hypothesis 5	Firms with non-unionized labor are more inclined to financialization

We use a panel data set consisting of annual data for 41 publicly listed non-financial firms in Turkey for the period 1990–2002. Therefore, we have 533 observations for each variable. The dependent variable is the financialisation measure (*FIN*), and observed explanatory variables ( $x_j$ ) are three macroeconomic variables (*CYCLE*, *GAP*, and *RER*) and a list of institutional variables (*CENTER*, *DISCRETION*, and *UNION*) and firm-specific control variables (*AGE* and *SIZE*). These variables are explained in detail in the following subsection.

To estimate the relationship between financialisation and the set of macroeconomic, institutional, and firm-specific control variables, we use the dynamic panel estimation technique. We use this method because it deals effectively with the issues of (1) endogeneity that may result from firm-specific fixed effects, (2) potential correlation and collinearity between the independent variables, (3) omitted variable bias, and (4) potential correlation between lagged dependent variable and firm-specific effects and the error term. Due to these problems, the ordinary least squares technique leads to inefficient and inconsistent estimates. We assume that the control variables that represent the firms' characteristics largely reduce the omitted variable bias. To tackle the stated methodological issues, most papers, such as Demir (2009), use the Arellano and Bond (1991) or Blundell and Bond (1998) generalized method of moments (GMM) estimators where lags of the dependent variable ( $y$ ) and independent variables ( $x$ ) are used as instruments. The Blundell-Bond specification is preferred for persistent autoregression as the lagged instruments become weak. The Arellano-Bond specification is as follows:

$$y_{i,t} = \alpha y_{i,t-1} + \sum_i \beta_i x_{i,t} + \sum_i \gamma_i x_{i,t-1} + \varepsilon_{i,t},$$

where  $y$  is the dependent variable,  $x_j$  are the explanatory variables, and  $\varepsilon$  is a random error term. The subscript  $i$  refers to firms and  $t$  refers to years. The explanatory variables and the dependent variable enter the regression in differenced form in the Arellano-Bond specification, which is a difference-GMM specification. In the existence of second-order autocorrelation, the estimators of this specification will be

biased and inconsistent. Blundell-Bond specification, on the other hand, uses the system-GMM approach where the explanatory variables enter the regression in levels. In this specification, an equation system of two equations (one for first differences and one for levels) is estimated. The standard instruments for the first differences equation are the first differences of the explanatory variables. The combination of the levels equation and the difference equation, which includes the first differences of the explanatory variables as instruments in the Blundell-Bond specification, is usually more efficient than the Arellano-Bond estimator.

An important shortcoming of dynamic panel models is the small number of cross-sections. Arellano and Bond (1991) and Blundell and Bond (1998) estimators are known to be asymptotically efficient with large numbers of cross-sections, and their instrumental variables may suffer from poor small sample properties, which in turn may produce biased results. Kiviet (1995) developed a method to correct for this bias in dynamic panel estimations using finite samples, called least squares dummy variable corrected (LSDVC). The LSDVC specification is as follows:

$$y_{i,t} = \alpha y_{i,t-1} + \sum_i \beta_i x_{i,t} + u_{i,t} + \varepsilon_{i,t},$$

where  $u_{i,t}$  are fixed individual effects. Kiviet (1995), using Monte Carlo simulations, showed that the LSDVC estimator is more reliable and efficient than the above-mentioned dynamic panel estimators, which use lagged variables as instruments. Bruno (2005a) developed a method to approximate the bias of the LSDVC estimator in unbalanced panels. He showed that the LSDVC estimator is more robust for small samples.

## 3.2 Variables

**3.2.1 Dependent variable** The dependent variable is the natural logarithm of financial income of non-financial firms, which we denote as *FIN*. In line with our definition of financialisation as the increasing importance of financial investments as a revenue-generating activity for non-financial firms, *FIN* encompasses financial revenues of non-financial firms earned on financial investments. We gathered data from the income tables at the firm level, which do not provide detailed information about earnings from foreign exchange transactions or government bonds separately. We operationalise *FIN* by a specific item in section F in the income tables, namely, ‘non-operating revenues and profits’.<sup>12</sup> Section F consists of four sub-items for non-operating revenues and profits: (1) interest

<sup>12</sup>In the income tables, the relevant section (in Turkish) is *F. Diğer Faaliyetlerden Olağan Gelir ve Karlar*.

income, (2) profit from participations, (3) utilised portion of allowances, and (4) other income and profits.<sup>13</sup> In the Turkish accounting system, the sub-item ‘interest income’ is an aggregated account that comprises financial revenues obtained from stocks, foreign exchange investments, and interest earnings from time deposits in banks, securities (bills and bonds) issued by the treasury, and other private firms. Unfortunately, detailed disaggregation with respect to these components is not publicly available.<sup>14</sup> The sub-item interest income is by far the largest sub-item in the non-operating revenues and profits account for most firms.<sup>15</sup> Section F reports revenues and profits mixed. Therefore, the dependent variable, *FIN*, obtained from the interest income sub-item, refers to revenues from financial operations inclusive of profits. It should be noted that *FIN* is a net item, that is, non-operating costs and losses are deducted. *FIN* data are normalised using wholesale price indices.

**3.2.2 Independent variables** There are three independent macroeconomic variables: the gap between returns to real investments and financial investments (*GAP*), the real exchange rate (*RER*), and business cycles (*CYCLE*).

*GAP* is calculated by deducting the real interest rate from the profit rate of a given firm. Therefore, a negative *GAP* represents a rate of return gap in favour of financial activities. Real interest rate is calculated by deducting the annual inflation rates obtained from consumer price indices from nominal average yields of a 12-month government bond. This rate reflects the risk-free rate of return to the financial investments by industrial firms. This variable helps test Hypothesis 1 about the relationship between *FIN* and *GAP*. We expect a negative association between *FIN* and *GAP*.

To test Hypothesis 2 we employ two variables, *RER* and *CYCLE*, which represent the business conditions of the economy. *RER* measures the effect of the movements in the changes in the relative value of the Turkish lira vis-à-vis major currencies. During the period of analysis, two major currencies were the

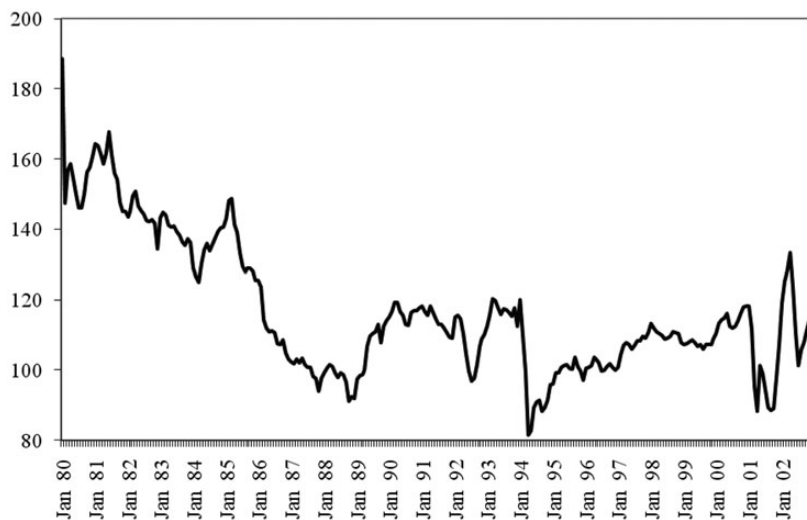
<sup>13</sup>In the income tables, the relevant items in section F (in Turkish) are as follows: (1) *İştiraklerden Temettü Gelirleri*, (2) *Bağlı Ortaklardan Temettü Geliri*, (3) *Faiz ve Diğer Temettü Gelirleri*, (4) *Faaliyetlerle İlgili Diğer Gelir ve Karlar*.

<sup>14</sup>From occasional ISE company reports, we found out that a significant part of interest income is received from government securities during the period of analysis. Kaplan, Özmen, and Yalçın (2006) also confirm that non-financial firms held substantial amounts of government securities, especially after the 1994 crisis. There are no legal restrictions for non-financial firms’ purchases of government securities. They can buy directly or indirectly, through repurchase agreements with banks.

<sup>15</sup>Among the remaining sub-items in section F, “profits from participations” and “utilised portion of allowances,” combined, refer to revenues obtained through non-operating profits of the firm from its relations with its subsidiaries, partnerships, and affiliates; “other income and profits” include all other revenues and profits from non-operating activities.

US dollar and the German mark (later replaced by the euro). Real exchange rate instability is an important source of macroeconomic uncertainties because Turkey is a highly open economy since 1989 and massive short-term flows of foreign capital affect the domestic economic variables often through its effect on the exchange rate. Figure 1 shows that after 1989 the volatility of the real exchange rate increased, although it is clear that after major shocks in 1989 (opening up of the capital account) and 1994 (a major foreign exchange crisis), the Turkish lira moved towards real appreciation during much of the period of analysis (1990–2002). Intuitively, one expects foreign exchange investments to slow down with this trend of the real exchange rate during the 1990s, but dollarisation was as high as 50% of total assets during this period, which was mainly due to increased demand for foreign assets for the purposes of hedging against macroeconomic uncertainties and risks brought about by foreign exchange rate instability (Metin-Özcan and Us, 2009). In particular, a downwards movement in the real exchange rate (i.e., real depreciation) can be viewed as a measure of macroeconomic uncertainties in Turkey must have facilitated *FIN* because it implies high inflation and high interest rates. Accordingly, the lower the RER (real depreciation), the higher we can expect *FIN* to be.

*CYCLE* is an indicator of business cycle. To compute *CYCLE*, first real GDP is detrended by deducting the trends in logged real GDP from observed logged real GDP, using the so-called Hodrick-Prescott filter (Hodrick and Prescott, 1997). In



**Figure 1** The movement of real exchange rate (1995 average = 100).

Note: An increase means real appreciation of the Lira while a decrease means real depreciation.  
Source: Central Bank of the Republic of Turkey. Electronic Data Delivery System.



a narrow setting, a positive figure points to a boom while a negative figure implies a recession. We assume that *CYCLE* reveals information about the changes in the expectations in the economy. For instance, during a boom we expect positive expectations for the future. As stated in Hypothesis 2, especially during recessions, a firm may be tempted to financialise for the purpose of hedging against negative expectations, whereas positive expectations during expansionary periods are expected to encourage fixed investments as a result of expectations of demand to expand.

There are three variables that represent institutional characteristics of the Turkish business system regarding financialisation behaviour: closeness to government (*CENTER*), family discretion (*DISCRETION*), and existence of union (*UNION*). In addition, we control for two important firm-specific characteristics: age (*AGE*) and size (*SIZE*).

*CENTER* is a dummy variable taking the value of 1 if the firm is a member of TUSIAD in the given year and 0 otherwise. As stated earlier, family-controlled big business groups, TUSIAD members in particular, have had particularistic relations with politicians and bureaucrats, which may have facilitated exploitation of economic rents. This variable helps test Hypothesis 3, suggesting that firms at the center (TUSIAD members) are more inclined to financialisation.

*DISCRETION* is a measure of the effect of ownership structure on *FIN*. It is a proxy measure of family discretion in financial decision-making measured as the number of partners in a firm and expressed in natural logarithm. There may also be internal restrictions on the discretionary decisions of shifting financial resources to *FIN* arising from ownership structures. Although Turkish firms are mostly entrepreneur-controlled firms, this central control may be restricted in case of partnerships with other families, foreign companies, or state-owned enterprises (Yurtoglu, 2003). We assume that as the number of partners decreases, the controlling family's discretion in financial decision-making increases. Therefore, we expect a positive association between family discretion (*DISCRETION*) and *FIN* as in Hypothesis 4 because the discretion is more concentrated.

*UNION* is a dummy variable that shows the existence of a union in the firm in the given year (1 if a union exists and 0 if it does not). Percentage degree of unionisation among workers at the firm level is not available. Considering the expectations of unions from the firms, we expect as in Hypothesis 5 that financialisation is restricted by unions because unions will usually resist non-operating activities that may potentially involve lay-offs or other practices that may reduce production activities. Therefore, we expect a negative association between *UNION* and *FIN*.

We have two control variables, *AGE* and *SIZE*. *AGE* is the natural logarithm of the age of the firm during the period computed as the number of years elapsed since the establishment year. The influence of *AGE* on *FIN* can be mixed. Considering the

learning effect, *ex ante*, we may expect that the more firms experience highly uncertain business conditions that create economic rents, the more they may learn how to survive in such environments, and therefore, the more they may be inclined to financialisation. On the other hand, one may also expect that regarding the imprinting effect of the periods the generations of industrial firms were founded (Stinchcombe, 1965), firms that were founded in the import substitution era in Turkey between 1960 and 1980 are more production oriented and thus less likely to engage in financial activity, whereas firms founded in the financial liberalisation era from 1980 onwards are more likely to engage in financial activity.

*SIZE*, which we measure by the natural logarithm of paid capital normalised by the wholesale price indices, may also influence *FIN*. In the Turkish context, large firms may be more inclined to *FIN* because they may have more slack financial resources for financial investments compared to smaller firms. Kaplan, Özmen, and Yalçın (2006) confirmed in an empirical study on the financial asset holdings of non-financial firms in Turkey that larger firms hold more financial assets due to precautionary and speculative motives and they are less financially constrained.

### 3.3 Data

For the empirical analysis, we gathered data for 41 non-financial companies listed in the ISE for the period 1990–2002. Among the non-financial firms listed in the ISE, data were available for all years only for these 41 firms. The main activities of these firms vary from textile to automotive. Two sets of data were used: (1) balance sheets and income tables of 41 firms, and (2) information about the characteristics of firms such as age, size, unionisation, number of partners, and governance structure. The former was obtained from ISE and the latter from the Capital Market Board. Data for macroeconomic indicators for the same period, real interest rates, real exchange rate, real GDP, and wholesale price indices are obtained from the Central Bank of the Republic of Turkey Electronic Data Dissemination Service.

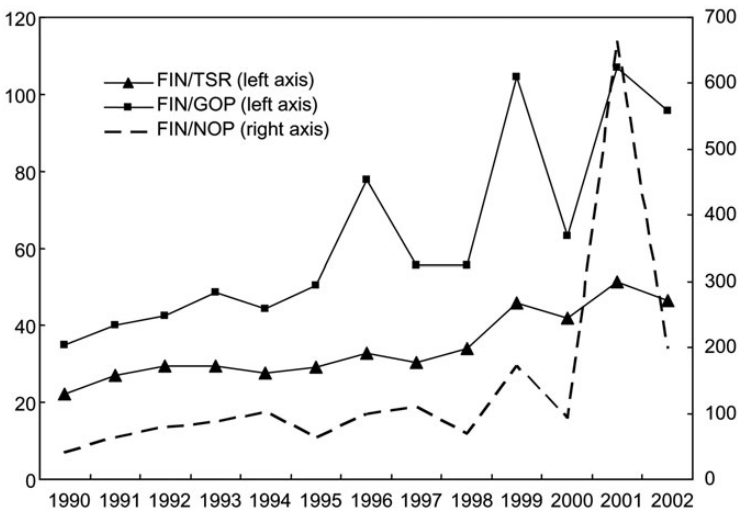
Descriptive statistics of data are summarized in Table 3. The averages of the rate of return gap and the real exchange rate are, respectively,  $-0.08$  and  $1.11$ . The average firm is 30.3 years old, employs 1482 employees, and has 6.5 partners. Employees in most firms are unionised; there is at least one union in 70% of the firms.

### 3.4 Trends in financialisation

The returns to financial investments as a percentage of total sales, averaged for the sample firms, are presented in Figure 2 for the period 1990–2002. The inclination of non-financial firms towards financial activities as a percentage of their sales

**Table 3.** Descriptive statistics for dependent, independent, and control variables

Variables	Mean	Median	Maximum	Minimum	Standard deviation
FIN	6.21	6.15	15.01	-8.96	3.87
GAP	-0.08	-0.07	1.62	-0.77	0.20
RER	1.11	1.12	1.21	0.98	0.08
CYCLE	0.00447	0.0032	0.0637	-0.0696	0.0398
AGE	30.3	29	67	3	12.44
SIZE	1482.4	481	9180	8	2134.8
UNION	0.7	0	1	0	0.44
DISCRETION	6.5	6	19	2	3.74
CENTER	0.609	1	1	0	0.488



**Figure 2** Financialization tendencies (unit: percentage).  
 Note: FIN: financialization earnings. TSR: total sales revenues. GOP: gross operating profits.  
 NOP: net operating profits.

revenues seems considerably high. On average, returns from financial investments amounted to 34.5% of their sales revenues. If returns to financial investments are expressed as percentages of gross and net operating profits, then industrial firms annually earn non-operating revenues of about 63.1% of their gross operating profits and 141.8% of their net operating profits. The increasing trends in these ratios are obvious.

**Table 4.** Regression results

	(1)	(2)
FIN <sub>t-1</sub>	0.147*** (0.043)	0.147*** (0.043)
GAP	-0.334 (0.519)	-0.102 (0.528)
RER	-8.011 (8.749)	-0.674 (6.129)
CYCLE	3.454 (11.879)	
GDP		-7.659* (4.100)
AGE	-0.096 (0.769)	-0.439 (0.777)
SIZE	0.668*** (0.262)	0.821*** (0.273)
UNION	-5.074 (4.309)	-5.190 (4.292)
DISCRETION	-1.301 (14.631)	-3.349 (14.583)
CENTER	2.543 (13.281)	2.268 (13.229)
Year dummies	Yes	Yes
Observations	451	451

Notes: The figures in brackets are standard errors.

M1: Arellano-Bond test that average autocovariance in residuals of order 1 is 0, where the null hypothesis is no autocorrelation.

M2: Arellano-Bond test that average autocovariance in residuals of order 2 is 0, where the null hypothesis is no autocorrelation.

Sargan test: Sargan test result of over-identifying restrictions (chi-square values).

\*\*\*significant at 1 percent, \*\*significant at 5 percent, and \*significant at 10 percent.

#### 4. Empirical results

The results of the econometric estimations based on the LSDVC specification are presented in Table 4.<sup>16</sup> For bias correction in LSDVC, it is necessary to start from an estimator. Bruno (2005b) developed a Stata package that allows for initiating the bias correction from Arellano-Bond and Blundell-Bond estimators. The standard errors (hence, *z* statistics) of the coefficients in the LSDVC specification are bootstrapped standard errors with 100 replications. In all regressions we use year dummies.

We ran two sets of regressions, one with *CYCLE* and the other one, alternatively, with *GDP* as the relevant variable for business conditions. The reason for using

<sup>16</sup>The Arellano-Bond and Blundell-Bond GMM results are not reported in Table 4 because of the over-identification problem.

GDP as an alternative measure is that the Hodrick-Prescott filtering method used to compute *CYCLE* is known to be highly sensitive to the endpoints in the time series, and the time series in this study spans only 13 years, which increases the risk of misrepresenting the effect of the business cycles. In Table 4 the regression including *CYCLE* is numbered (1) and the regression including *GDP* is numbered (2).

We focus first on macroeconomic variables and then turn to institutional variables. The findings suggest that amongst the macroeconomic variables business cycles (*CYCLE*), the rate of return gap between real and financial investments (*GAP*) and real exchange rate (*RER*) do not influence *FIN*, whereas *GDP* has an impact on *FIN*. The coefficients of *GAP* and *RER* are negative as expected, but they are statistically insignificant. Therefore, Hypothesis 1 is not validated statistically. A significant and negative coefficient of *GAP* implies allocation of more resources to real investments by firms in response to higher returns to real investments. Significant and negative coefficient of *RER*, on the other hand, indicates financialisation-reducing effect of real depreciation. With real depreciation, non-financial firms can be expected to hedge against macroeconomic risks and uncertainties arising from the currency risk by transferring part of their internal funds to foreign currency or foreign currency-denominated assets. However, we find no statistical evidence for the relationship of *GAP* and *RER* with *FIN*.

The findings demonstrate different influences of the business cycle (*CYCLE*) and economic growth (*GDP*). We expect a negative coefficient for both variables as proposed in Hypothesis 2, which states that positive demand expectations affect financialisation negatively. The coefficient of *CYCLE* has a positive sign but is insignificant, whereas the coefficient of *GDP* is statistically significant at 10% and negative. This finding implies that the non-financial firms are more inclined towards financialisation when GDP growth is negative, that is, under worsening business conditions. We interpret the negative association between GDP growth and financialisation as evidence for the financialisation behaviour of non-financial firms as a natural firm behaviour. As Demir (2009) showed, during times when economic growth rate is high, non-financial firms resort to real investments.

All institutional variables (*UNION*, *DISCRETION*, and *CENTER*) turn out to be statistically insignificant. Interestingly, proximity to the government (*CENTER*) and discretion in the decision-making process (*DISCRETION*) do not have explanatory power in explaining the financialisation behaviour of the non-financial firms in Turkey. Therefore, we conclude that there is no empirical support for Hypotheses 3 and 4. The coefficient of *UNION* is negative but statistically insignificant. Therefore, we do not find a relationship between unionisation and financialisation, contrary to Hypothesis 5, which asserts that union power significantly limits financialisation. We expect that the existence of a labour union, as a stakeholder in the institutional environment, limits the

financialisation motive of the firm due to its social responsibilities and limits discretion of the management in shifting financial resources from real productive activities towards financial investments.

Among the firm characteristic variables, *AGE* and *SIZE*, only *SIZE* is statistically significant and positive. These findings indicate that larger firms are more likely to engage in financialisation, whereas there is no relationship between firms' age and financialisation. This implies that of two competing explanations for the effect of firm's age on financialisation, learning versus imprinting, are not supported by the findings. Larger firms with more slack financial resources are more inclined to financialisation, as suggested by the relevant literature (Kaplan, Özmen, and Yalçın, 2006).

Overall, Hypothesis 2 is empirically validated, but there is no evidence for or against Hypotheses 1, 3, 4, and 5 due to the statistical insignificance of the variables of interest. These findings beg for explanation. Macroeconomic results indicate no response of financialisation to the rate of return gap between real and financial investments. The negative association between economic growth and financialisation is informative of these firms' behaviour in the short run, when they are not sure about economic stability and they are most likely to distrust macroeconomic management. It is noteworthy that the period of analysis (1990–2002) is characterised by high inflation rates, frequent negative economic shocks (1994 currency crisis; 1998 Asian financial crisis, which also slowed down economic growth in emerging markets including Turkey; 1999 earthquake, which affected industrial production adversely; and the 2000–2001 financial crisis) and political uncertainties that prevailed due to frequently changing and short-lived coalition governments. With these findings, one can argue that financialisation may have become an institutionalised behaviour facilitated by such macroeconomic and political uncertainties.<sup>17</sup> Özen and Akkemik (2012) argue that financialisation has become institutionalised in Turkey as a survival strategy for firms under such uncertainties. In this respect, the significant positive affect of financial revenues of the previous year ( $FIN_{t-1}$ ) on the current year's FIN can be regarded as an implication for the firms' habitualised engagement in financialisation irrespective to some degree from the macroeconomic circumstances.

With regards to macroeconomic factors, the findings of three previous studies, Stockhammer (2004), Orhangazi (2008b), and Demir (2009), are comparable to the findings of this study. Among these studies, Demir (2009) showed for Argentina, Mexico, and Turkey that the rate of return differential in favour of financial investments and macroeconomic uncertainty emanating from exchange rate and

<sup>17</sup>As argued by Orhangazi (2008b) and Demir (2009) for other countries, with more financialisation, industrial firms may have even contributed to the worsening of macroeconomic expectations given that financialisation leads to reduced real investment.

inflation volatility significantly affects the portfolio choice of firms. Increasing rate of return gap and uncertainty leads to reduced real investment, while economic growth increases it. [Orhangazi \(2008b\)](#) provided empirical evidence for the crowding out of real investments in the United States due to higher rates of return in financial investments, which create incentives for managers in non-financial firms to reduce internal funds that could be used for real investments. Finally, using an investment function, [Stockhammer \(2004\)](#) found support for negative effect of financialization on capital accumulation for four major Organisation for Economic Co-operation and Development countries (France, Germany, the United Kingdom, and the United States).

We also examine the effects of institutional characteristics that represent the institutional environment in Turkey (closeness to the government, discretion of the managerial power, and labour union power). An important finding is that closeness to the government, demonstrated by TUSIAD membership, and discretion of the managerial power do not seem to have an impact on financialisation. We can conclude that firms with ownership structures that allow for greater discretion to the owning family are not likely to engage in financialisation. It is interesting to note that, given the dominantly family-controlled nature of most non-financial firms in Turkey, they seem to have an ownership structure that is unrelated to financialisation. In addition, there is no statistical evidence that labour unions discourage financialisation. We take this as a sign that the power of labour unions was reduced during the period of analysis. This finding deserves further investigation in the future.

We cannot strongly argue that the abovementioned institutional effects in Turkey are peculiar to all state-organised business systems because of the single-country focus of this study. However, we provide at least a preliminary view of how the institutional structure of state-organised business systems might influence financialisation compared to a liberal business environment. It is already known from studies on liberal systems, the United States in particular ([Lazonick and O'Sullivan, 2000](#); [Dobbin and Zorn, 2005](#)), that the 'institutional change' in corporate governance ideology from 'retain and reinvest' to 'downsize and distribute' strategy, or in general, to 'shareholder value revolution', has shaped financialization. Yet our knowledge on how the state-organised institutional environment shapes financialisation is limited.

## 5. Concluding discussion

The main contribution of this article to the financialisation literature is dual. First, unlike previous studies, which focus on the effects of financialisation, we focus on the determinants (causes) of financialisation behaviour of non-financial firms. Second, we incorporate institutional effects by employing historical

institutionalism, suggesting that the institutional structure of business systems also shapes financialisation.

Overall, we have found that macroeconomic conditions and the sizes of firms influence the financialisation behaviour of Turkish non-financial firms. Empirical findings show that macroeconomic factors influence the financialisation behaviour of Turkish industrial firms in a similar fashion as argued by [Stockhammer \(2004\)](#), [Orhangazi \(2008b\)](#), and [Demir \(2009\)](#), that is, macroeconomic uncertainties facilitate financialisation. On the other hand, institutional characteristics of state-organised business system in Turkey (such as close ties with the government, ownership structure of the firms, discretion of the managerial power, and unionisation) do not have an impact on financialisation.

Another important contribution of this study is that it extends the scope of the financialisation literature to the effects of institutional context at the national level. Although the developed–developing country dichotomy is a useful tool to differentiate the causes of financialisation, such as macroeconomic uncertainty versus shareholder value revolution ([Orhangazi, 2008b](#)), it does not adequately consider distinguishing institutional characteristics that constrain and enable firms' behaviour embedded in the nation-states ([Whitley, 1999](#)). This article takes a step forwards in this regard and focusses on Turkish non-financial firms embedded within a state-organised business system.

The article suffers from some limitations. The most important one is the relatively short time series (1990–2002) due to lack of longitudinal data. The results should also be evaluated with caution because of our focus on one country only. The potential causes of financialisation, especially the institutional causes, may not be generalized, and the relation between financialisation and government's policies is seriously restricted by the single country focus. Future studies in this line of research may extend the institutional variables to cross-country level.

It is important to note that the measure of financialisation in this article does not allow us to separate out the effects of financial bubbles from increases in financial activity at given prices of financial assets, which stands as another issue future research in this area needs to take into consideration. Future lines of research should also examine whether firms financialise because financialisation is common behaviour in the Turkish business system. In other words, financialisation may be evaluated as a common way of doing business and a habitualised action to survive in a business environment characterized by economic uncertainties ([Özen and Akkemik, 2012](#)).<sup>18</sup> This issue remains to be tested empirically.

<sup>18</sup>[DiMaggio and Powell \(1983, p. 151\)](#) call such behaviour 'mimetic isomorphism', which may result from efficient responses to uncertainty. In addition, [Abrahamson and Rosenkopf \(1993, p. 488\)](#) argue that firms may imitate each other because of a bandwagon pressure caused by the sheer number of organisations adopting the behaviour.



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