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Abstract

This paper provides an alternative explanation of the negative relationship between price synchronicity and proprietary right protection that are uncorrelated to the information hypothesis. Using empirical data for 40 countries, we show that stock market volatility and firm size have significant impact on stock price synchronicity. We find significant correlations of international R^2 disparity with industry structure integrations. The derived industry integration indices that capture industry correlations significantly explain cross-sectional and temporal variations in price synchronicity. The results imply that tighter industry integration leads to higher R^2, and also explain away the property rights factor found in the information hypothesis.

Keywords: Price Synchronicity, Market Capitalization, Property Rights Protection, Industry Structures, Information Hypothesis, Market-wide risk

JEL Codes: G14, G15

1. Introduction

Roll (1988) suggests that high stock price synchronicity or high R^2 corresponds to low firm-specific price variation, which is usually caused by information inefficiency in the market. Many finance studies have since attempted to test the relationship of price synchronicity and information efficiency. In this paper, we find industry structure integration as an alternative factor explaining international R^2 disparity, which is not related to an information-based reason as argued in some earlier studies. Using the derived industry integration indices to capture the effects of industry compositions and intra-industry firm correlations, we show that the indices significantly explain cross-sectional variations in price synchronicity as well as variations in R^2 over time. The results imply that tighter industry integration leads to higher R^2; and the results are independent of the property rights factor.

In an important paper, Morck, Yeung and Yu (2000) (referred to as MYY in the rest of this paper) show empirically that international stock price synchronicity varies considerably across 40 countries in 1995. Their study shows that the private investor property rights, which are represented by the "good government index" (GGI) variable, significantly explain the cross-sectional variation in R^2 for different countries' stocks. In countries with a low GGI and weak property right protection, investors do not expend enough private resources to extract information about firms, since any benefit from trading and owning shares of valuable firms may be dissipated because of the high risk of expropriation and inter-firm transfers that are not transparent to shareholders.

Financial analyst coverage was investigated to see if more intense coverage led to higher information efficiency and thus lower price synchronicity. However, many studies indicated the opposite results that more analyst coverage led to higher price synchronicity. Financial analysts, especially in emerging countries with scant property rights, employ macro-economic market-wide information, instead of firm-specific information, to produce market reports that tend to move stock prices simultaneously, and result in a high R^2 or price synchronicity. Some studies indirectly adduce price non-synchronicity as a strong presence of private information and show that under low R^2, current returns have a strong predictability on futures earnings. Firms with lower R^2 also display more effective corporate investment decisions and higher capital allocation efficiency.

The direct evidence of low R^2 associated with market information efficiency, however, remains elusive and inconclusive. The studies that show high R^2 results argue that price processes are efficient; whereas, others that show low R^2 results argue that momentum processes with lagged price adjustments are inefficiency.

In this paper, we first extend MYY's study on international stock price synchronicity to cover the 18-year study period from 1995 through 2012. The GGI continues to provide supports for the information hypothesis, except for the years 2010 and 2011, in the country-level cross-sectional regressions. We find that cross-section wise, local volatility represented by the standard deviation of local market index return is a significant explanatory variable as GGI for the cross-sectional variation in R^2 in a number of years. This implies that stock return correlation with market return cross-sectionally increases with market return volatility, which is consistent with extant empirical results about analyst coverage impacting both volatility and R^2.

The main result in our study is that capitalization value (firm size) and industry market integration affect inter-country and intra-country differences in R^2's. By sorting listed firms of a country by the market capitalization into deciles, the average R^2's of the decile portfolios are explained by firm size in a significant way than by the country's GGI, which becomes less important in explaining disaggregated R^2's. We explore how this size effect could be connected to industry market structure and the level of firm integration in the country. We construct value-weighted industry integration indices by incorporating information on the country's industry structure and degree of within-industry correlations to explain price synchronicity. This industry integration factor is as important as the GGI that represents the country's degree of property rights protection.

Industry market integration and size effect remain significance in explaining variations in R^2 after controlling for country specific factors. First, we find that when the fixed country effects are introduced to the panel regression, the effect of GGI diminishes markedly resulting in estimated coefficient that is no longer significantly negative. Individual country culture is a plausible fixed effect in this regard. While we do not rule out the information hypothesis as a partial explanation of the cross-sectional variation in average stock return R^2's across countries, we believe that the stark international differences remain an issue to have yet been satisfactorily resolved. Second, the generally high average R^2 observed in emerging countries versus the generally low average R^2 observed in developed countries need not arise due to the assumption of selective information harvesting by analysts and also the assumption of information efficiency underlying the information hypothesis. The current literature is inconclusive on the finding of whether a high R^2 reflects price inefficiency, or a low R^2 reflects price efficiency. For instance, in Li et at. (2014), R^2 captures noise rather than firm-specific information; and Ashbaugh-Skaife et at (2006) find little support of using stock price synchronicity as a measure of firm-specific information internationally. The story of selective gathering of market-wide information instead of firm-specific information suggests that smaller firms in emerging countries may face a higher R^2 than larger firms in the same country, because investors would not expend resources to discover firm-specific information in anticipation of the high risk of losing property rights. In developed countries with better property right observances, we would not expect to see differential R^2's across firms of different size. There has been empirical evidence that larger firms tend to systematically display higher R^2's. We show in our study that indeed this is the case not just in U.S., but in all countries whether developed or emerging.

The existing finance literature has documented differing property rights as the reason for observing the disparity in international stock price synchronicity. This reasoning requires the information hypothesis and a clear notion of linking R^2 to market information efficiency. One key implication of our study is that the puzzle of international stock price synchronicity needs not be resolved using the information-based hypothesis. The disparity in R^2's across countries does not require any argument whether the stock market is (perfectly) informationally efficient or imperfectly informationally efficient given financial analysts' reports, as long as there is some price impact upon such investor investigations. We believe that the phenomenon is plausibly linked to industrial organization matters and relative width of industrial development in each country. We derive the decile-based and industry-sector-based correlation indices to represent the level of industry integration in the sample countries, and added the indices in the panel regressions. We find consistent and positive correlations between the industry integration indices and price synchronicity in all models, which include country-panel, decile-panel, industry sector-panel and firm-level panel.

For emerging and less developed countries, the growth and increased capitalization of firms lead to more investments in vertical and horizontal integrations, and thus increased R^2's, since listed firm's stock prices tend to be more tightly knitted. On the other hand, for developed countries, the growth and increased capitalization of firms lead to more diversity and horizontal competition of industries. The latter reduces R^2's since the firms become more diversified, and their stock prices show more idiosyncratic variations. By disaggregating firms within each country into deciles by R^2's of these firms' portfolios, we are able to discover the new findings explaining variation of R^2's within country and variations of R^2's across countries. With the additional factors, the effect of GGI becomes insignificant.

The remainder of the paper is organized as follows. Section 2 provides a literature review of past studies related to the issue of stock return synchronicity. Section 3 discusses data sources, construction of key variables and regression specifications. Descriptive statistics are reported. Section 4 provides statistical analyses of the various regression models and examines the size effects on synchronicity. Section 5 investigates plausible effects of industry integration on the differential synchronicity across countries. Section 6 contains the conclusions.

2. Literature Review

Roll (1988) finds a low R^2 when fitting U.S. stock returns to standard asset pricing models and attributes the result to large residuals in firm-specific return variations or idiosyncratic risk. He further argues that information inefficiency causes high stock price synchronicity or R^2 in a market, because firm-specific risks are not fully embedded, or reflected in stock prices. Since then, stock return R^2 or stock price synchronicity has become a measure that is widely studied in the finance literature in conjunction with information issues.

MYY (2000) produce an important study explaining the low synchronicity or R^2 in developed countries, but high synchronicity or R^2 in emerging or less developed countries. Using a good government index ("GGI") that captures the levels of corruption, expropriation of investor property rights and repudiation of contracts, MYY find a negative correlation between GGI and aggregate stock return synchronicity across countries. They show that the negative correlation between country stock R^2 and GGI is independent of macroeconomic fundamentals. In emerging countries where governments have poor track records of property rights protection, inter-corporate shifting of earnings by insiders discourages risk arbitrageurs to expend effort in extracting firm-specific information. In contrast, arbitrageurs will trade actively on firm-specific information, if their private property rights are safely guarded. Suppose a market is efficient, risk arbitrageurs' trades bring about quick adjustments in specific stock prices, and increase idiosyncratic return variations, which in turn contribute to a lower synchronicity or R^2.

Jin and Myers (2006) argue that poor property right protection alone is not enough to drive price synchronicity in the market. They suggest that opaqueness in firm-specific information is a necessary condition in driving price synchronicity. They propose a model in which opaqueness occurs because insiders to a firm and outside investors have asymmetric information with regard to firm-specific news. Durnev, Morch and Yeung (2004) show that poor private property rights protection induces inter-corporate income shifting by corporate insiders and reduces informativeness of firm-specific factors. Durnev, Morck, Yeung and Zarowin (2003) find that low R^2 stocks exhibit higher correlation between current returns and future earnings, indicating more relevant information captured in the prices.

Financial analysts' forecasts and reports have impact on stock prices. Ramnath, Rock, and Shane (2008) provide a comprehensive review of literature that shows the prevalent use of financial analysts' reports in information studies. Related to the synchronicity issue, financial analysts' coverage may proxy for the extent of information efficiency. While the earlier citations link information efficiency to lower price synchronicity, other studies appear to indicate the opposite.

Piotroski and Roulstone (2004) use a large number of US stocks between 1984 and 2000 to examine the roles of independent security analysts in processing market-wide and firm-specific information. Chan and Hameed (2006) use sample stocks from 25 emerging markets between 1993 and 1999. Despite the difference in the samples used in the two studies, they both found a similar positive relationship between price synchronicity and security analysts' coverage. They show that stock prices move more synchronously in markets covered by a large number of security analysts. While it is plausible for the results in Chan and Hameed (2006) to be consistent with the information hypothesis of MYY (2000) by assuming that analysts in emerging countries rely more on macroeconomic information to generate their earnings forecasts than using firm-specific information, it is more difficult to connect Piotroski and Roulstone's (2004) results with MYY's story. In Piotroski and Roulstone's study, it is puzzling as to why security analysts do not generate more firm-specific price variations that cause low R^2 in the developed markets such as in US. Piotroski and Roulstone (2004) interpret their results as evidence of analysts specializing by industry using more industrywide and market-wide information in their stock price coverage. Chan, Hameed, and Kang (2013) also find that synchronicity increases with liquidity in the stock trading.

Barberis, Shleifer, and Wurgler (2005) find that inclusion in (deletion from) the Standard and Poor's 500 index, which presumably increases (decreases) firm-level transparency, increases (decreases) stock return synchronicity. Ambrose, Lee and Peek (2007) find similar results in studying REITs. Other studies relate price synchronicity to investing styles (Barberis and Shleifer, 2003), wealth effect (Kyle and Xiong, 2001), financial constraints (Yuan, 2005), portfolio rebalancing activities (Kodres and Pritsker, 2002), and strategic trading (Pasquariello and Vega 2007). In related papers, Wurgler (2000) finds that capital allocation efficiency increases with firm-specific information as well as legal protection of minority investors. Chen, Goldstein and Jiang (2007) use price non-synchronicity as a measure of private information and show that it has a strong positive effect on corporate investment decisions.

The direct evidence of low R^2 associated with market information efficiency is not conclusive. MYY (2013) use dynamics to reconcile these conflicting results in the causality of firm-specific return volatility. However, the two recent studies find evidence to refute the idea that the high R^2 of stocks in less developed countries is due to opaqueness of firm-specific information. Firstly, Dasgupta, Gan and Gao (2010) show that lumpy time-variant firm-specific information is efficiently impounded into current stock prices, thus causing smaller future price variations and higher price synchronicity, when the market is transparent. They explain that investors' learning about time-invariant fundamentals increases price synchronicity of older firms relative to those in younger firms. They state that contrary to the conventional wisdom, stock price synchronicity or R^2 increases when transparency improves, but not the other way around.

Secondly, Hou, Peng and Xiong (2013) argue that countries or markets with low R^2 need not be more informationally efficient. They propose an alternative setting that explains stock return variance based on investor sentiment instead of pure information. Thrit empirical evidence in both the US and emerging markets supports the behavioral finance theory by showing that lower R^2 is associated with stronger medium-term price momentum and longer-term price reversal, which are contrary to the market efficiency explanation. There are other studies, such as Ashbaugh-Skaife, Gassen, and LaFond (2005), which find little empirical support for interpreting stock price synchronicity as a measure of firm-specific information; and Pantzalis and Xu (2008) argue that it is inappropriate to view low synchronicity as indicative of high stock price informativeness.

In the following sections, we show empirical evidence for an alternative explanation of the disparity in R^2's across countries, which does not require the stock market to be informationally efficient. Our explanation also does not require the assumption that analysts in less developed countries report more of macroeconomic news, and less of firm-specific news.

3. Data, Empirical Variables, and Descriptive Statistics

3.1. Stock return synchronicity as dependent variable

We collected weekly stock price data for all public firms on stock exchanges in the same 40 countries as those used in MYY's (2000) study from Thomson Reuters' Datastream. Based on the cut-off date as on 31 December 2012, we exclude newly listed stocks with stock return data that are less than ten weeks from the cut-off date. A stock must have at least 40 weeks of return data before it is included in our sample. We exclude stocks with no trading data within a week, and stocks with outlier weekly returns exceeding 25% in order to reduce measurement errors that may bias the results.

Unlike MYY (2000) who use biweekly (fortnightly) returns, we use weekly returns in our empirical analyses. Jin and Myers (2006) also use weekly returns. The two-week-long thin-trading problem suggested in MYY is no longer a serious issue for most of the countries in the ensuing years after 1995, and we believe that the use of higher frequency return data improve estimation and testing efficiencies due to a larger sample size. We compute the weekly stock return as the difference in natural logarithm of stock prices, and as in MYY, we adjust a lag of one day for the U.S. market return relative to returns of other Far East countries in order to synchronize their timings as much as is possible.

The final sample covers an average of 26,780 stocks each year across the 40 countries during the years from 1995 to 2012. This gives a total of 475,701stock-year sample. The number of stocks increased at a uniform rate. The total number of stocks used in our study increases from 15,490 stocks in 1995 to 32,322 stocks in 2012.

3.2. Stock Price Synchronicity Measures

We use the same country-level regression model as in France and Roll (1986), Roll (1988), and also MYY (2000) to compute the R^2 by fitting weekly return r_{ijt} of stock *i* in country *j* in week *t* :

$$r_{ijt} = \alpha_{ij} + \beta_{1,ij} r_{m,jt} + \beta_{2,ij}[r_{US,t} + e_{jt}] + \varepsilon_{ijt} \tag{1}$$

where $r_{m,jt}$ is the continuously compounded local stock market return; $r_{US,t}$ is the continuously compounded US stock market return; e_{jt} is the log of the local currency relative to US dollar from week t-1 to week t; and $[r_{US,t} + e_{jt}]$ is the US stock return in a local currency term, which is included to account for foreign funds flow effect in investing in the global US market. α_{ij}, $\beta_{1,ij}$ and $\beta_{2,ij}$ are regression coefficients, and ε_{ijt} is an *i.i.d.* residual error.

For each individual firm *i* of each country starting from 1995 to 2012, the weekly returns are fitted with least squares regressions year by year as in Equation (1) using one full year of weekly return data. We obtain the firm-year R_{ijy}^2, where *y* indicates the respective year 1995, 1996,…..,2012, for each regression. Based on the firm-year R_{ijy}^2, which measures the proportion of stock return variance in firm *i* of country *j* that is explained by local stock market return $r_{m,jt}$ and currency-adjusted US stock market return $r_{US,t}$, we compute weighted average R_{ijy}^2's for all stocks i in country j in year y. We use two different weighting schemes, which include the error-weighted (ERW) scheme as in MYY, and the equal-weighted (EQW) scheme. The ERW scheme uses the fraction of TSS for each firm to the overall TSS as weight. The EQW scheme gives an equal weight to each firm's R^2. The error-weighted country-year R^2, or ERW, is given by:

$$ERW_{jy} = \frac{\sum_i R_{ijy}^2 \times TSS_{ijy}}{\sum_i TSS_{ijy}} = \frac{\sum_i ESS_{ijy}}{\sum_i TSS_{ijy}} \tag{2}$$

where TSS denotes the total sum of squares of regression errors, and ESS denotes the explained sum of squares of regression errors. The equal-weighted country-year R^2, or EQW, is given by

$$EQW_{jy} = \frac{\sum_i R_{ijy}^2}{N_{jy}} \tag{3}$$

where N_{jy} denotes the number of firms deployed in the regression in country *j* in year *y*. EQW R^2 is a viable alternative measure to ERW R^2. It puts an equal weight on all firms' R^2's in each country. As TSS is mostly larger for smaller firms, the smaller firms tend to have lower R^2, and ERW R^2 may bias downward from the EQW R^2. In general, the EQW values are higher than ERW. Equal weighting is used in some recent studies, such as Eun, Wang, and Xiao (2015).

For regression purposes, we transform ERW R^2 and EQW R^2 from the bounded interval of [0, 1] using the logistic transformation process as in MYY:

$$\Upsilon_{jy} = \log\left(\frac{R_{jy}^2}{1-R_{jy}^2}\right) \tag{4}$$

where R_{jy}^2 is equal to ERW R^2 or else EQW R^2. Υ_{jy} is used as the dependent variable in subsequent regressions. For exposition purposes, we may sometimes conveniently refer to this log-transform of ERW R^2 as LERW, and log-transform of EQW R^2 as LEQW.

For industry level aggregation, we aggregate the firm-year R_{ijy}^2 across each industry k following error-weighted scheme and equal weighted scheme. The industry classification is primary based on 4-digit sic code. Furthermore, we integrate those industries with only 1 firm by using the 2 digit sic code for each year, and each country.

3.3. Good Government Index (GGI)

MYY constructed a good government index (GGI) based on three indexes that are "corruption index", "risk of expropriation index" and "repudiation of contracts by government index" from La Porta, Lopez De-Silanes and Shleifer (1998).[1] The three indexes assign scores ranging from zero to ten for each country included in the survey. A low score indicates a government's low respect of private property rights. MYY use the sum of the three index scores to derive the GGI index in their empirical tests. They found that governments with low GGI are associated with their country stock markets having high synchronicity in stock prices.

However, due to the difficulty in replicating and extending exactly the same three MYY (2000) indexes to later years, we use the closest proxy indexes available to create a comparable GGI that shares the same characteristics of MYY's GGI. We use the "corruption perception index" (CPI) published by Transparency International and a component indicator representing "property right" in the Index of Economic Freedom (IEF), an index jointly published by the Wall Street Journal and the Heritage Foundation, to construct our GGI. These indices are publicly available. We normalize the two indexes on the scale of 0 to 10, where 10 is the highest score. For the normalized CPI, a score of 10 indicates that a country is perceived to be the least corrupt. For the normalized property right indicator in IEF, a score of 10 indicates the lowest risk of expropriation by the government[2]. A score of zero represents the extremes of corruption and highest risk of expropriation. We collect the yearly scores of CPI and IEF's property right index for the 40 countries from 1995 to 2012. Our GGI index is the sum of the scores of the two normalized indexes. A high GGI score indicates that a country *j* has relatively low levels of perceived corruption and expropriation risks either through "outright confiscation" or "forced nationalization" by the government.

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[1] See La Porta et al (1998) for detailed descriptions of the three indexes.

[2] The Index of Economic Freedom (IEF) assigns the highest score of 100 to a country that fits into the criteria: "Private property is guaranteed by the government. The court system enforces contracts efficiently and quickly. The justice system punishes those who unlawfully confiscate private property. There is no corruption or expropriation."

3.4. *Control and Structural variables*

Following MMY, we employ the natural log of per capita GDP in nominal U.S. dollar (GDP) and logarithm of the number of stocks listed on each country's exchange (NSTK) as control variables. Both variables are closely related to the size of the stock market. If the size is small, then the individual stock returns will be more closely associated with the market index, which is a weighted average of the individual stock returns, and this will in turn affect the R^2's. Thus the control variables should remove the impact on R^2 due to this technicality.

As in MYY, we use the same set of structural variables for the price synchronicity regressions (see their Tables 4 and 5). These structural variables are postulated to have some effects on the dependent variable of price synchronicity. These variables include the natural log of geographical size in square kilometers for each country j (GEO_j), and the variance of the quarterly GDP growth data from the last five years ($VGDP_j$). Structural variables also include the Herfindahl indexes and earnings co-movement index described as follows.

We use the MYY's approach to compute an earnings co-movement index for each firm i in each country j and year y by first regressing firm i's returns on assets or ROA_{ijy} on the market value-weighted average of the returns on assets of all firms in country j of year y, $ROA_{m,jy}$.

$$ROA_{ijy} = a_{ij} + b_{ij}ROA_{m,jy} + \epsilon_{ijy} \ . \tag{5}$$

The R^2's obtained from the regressions of ROA's of all firms i in the same country j for year y, denoted as $R^2_{ijy}\,(ROA)$, are then averaged in an analogous way to the error-weighting scheme for returns regressions. The weight for each ROA R^2 is the fraction of TSS to the total TSS for all firm ROA regressions in country j. Thus the country j earnings co-movement index (ECI) is computed as

$$ECI_{jy} = \frac{\sum_i R^2_{ijy}\,(ROA) \times TSS_{ijy}(ROA)}{\sum_i TSS_{ijy}(ROA)} = \frac{\sum_i ESS_{ijy}(ROA)}{\sum_i TSS_{ijy}(ROA)} \ . \tag{6}$$

The $ECI_{j,y}$ is estimated using firm ROA_{ijy} data for the previous 5 years. All the data used in computing the structural variables are collected from Datastream. There are minor differences in the way we compute the ECI here. MYY (2000) drop some countries in the ECI calculations because "*…earnings data are available for very few firms…*"; whereas, we prefer to use whatever number of firms that are available (Poland has the smallest number of 60 stocks), and we have a complete set of ECI variables in all 40 countries for all the years from 1995 to 2012.

We use ex-ante data, for example, 1991-1994 for computing ECI in 1995, rather than using 1993-1997 for computing ECI in 1995.

We use yearly total sales of all listed firms on each country's exchange to compute proxies for economic specialization or diversification. Let S_{ij} denote the annual sales of a firm i in country j and S_{kj} denote the aggregate sales of firms in industry k in country j. We compute the industry-based Herfindahl index as $IHHI_j = \sum_{k=1}^{K}\left(\frac{S_{kj}}{\sum_{i=1}^{N} S_{ij}}\right)^2$ and firm-based Herfindahl index as $FHHI_j = \sum_{i=1}^{N}\left(\frac{S_{ij}}{\sum_{i=1}^{N} S_{ij}}\right)^2$ respectively, where K denotes the total number of industry sectors in country j, and N denotes the total number of firms in country j. A large industry-Herfindahl index indicates a lack of industry diversity, while a large firm-based Herfindahl index indicates dominance of a small number of firms.

In addition to the explanatory variables used in MYY, we consider the average capitalization values of firms in each country. For any firm in a year, its number of shares at year-end is multiplied by the firm's year-end stock price to obtain a capitalization value. To put capitalization values of all firms on the same footing across all countries, we convert the values into US dollars using the year-end exchange rates. For any country in any year, the firm's average capitalization variable in our regressions is the natural logarithm of the equal-weighted average of dollar capitalizations across all firms in the country. After grouping the firms in a country into 10 deciles sorted by dollar capitalization, we compute the associated decile regression variable denoted by ACAP as the log of the equal-weighted average of dollar capitalizations of firms within the decile. We employ average capitalization on a per firm basis to match with the dependent variable of average stock return R^2 or its transform. The aggregate capitalization variable, which is closely correlated with NSTK, would not provide additional useful information.

We compute another variable, which is the sample standard deviation or volatility of the 52-week natural log- local stock returns each year for each of the 40 countries, and denote it as IVOL. This variable captures the amount of news in the market; and more news leads to higher market volatility, and hence, affects the price synchronicity in one way or another. We do not differentiate whether the market volatility is due to either market-wide information or idiosyncratic news. Suppose macro-economic wide news increases market volatility within a country or across countries, we expect such news to move stock prices synchronously and lead to higher price synchronicity. A list of variables with the descriptions and the abbreviations is given in the Appendix 1.

3.5. Descriptive Statistics

Table 1 shows the descriptive statistics (means and standard deviations) for the key variables used in our study. The aggregate country level statistics are computed year-by-year for the 40 countries covering the periods 1995-2012. Out of the 18 years, the EQW averages across all countries are higher than ERW in 12 years. When it occurs, the error weights using sum of squared residuals are usually larger for the small capitalization firms that tend also to have lower R^2. However, where TSS is non-monotonic, average ERW can be higher than EQW.[3]

[Insert Table 1 here]

Tables 2a, b, c, and d show the values for selected variables used in our study for all countries in the snapshot years 1995, 2000, 2005, and 2010. The countries are partitioned into a developed country group and a developing or emerging country group, based largely on a per capita GDP level.

[Insert Tables 2a, 2b, 2c, 2d here]

From Table 2a, we see that ERW and EQW R^2's of all the countries vary non-monotonically through time; though there was a general drop in 2005, and subsequent peaking around 2010 to 2011, when the global financial crisis was abated. A number of developing countries, such as Malaysia, Pakistan, Mexico, Philippines, Poland, and Taiwan, and the developed country of Korea show a gradual drop in the country R^2 over the 18 years. Most developed countries see an increase in country R^2 over the 18 years. Although GDP per capita for countries, such as Canada, Holland, Ireland, Italy, Norway, U.K., China, Czech, Chile, Columbia, India, and Indonesia, increase at a fast pace; whereas, others such as Hong Kong, Japan, Peru, Taiwan, and Thailand increase more slowly. On average across all countries, GDP per capita increases at a compounded rate of about 4.6% per year. Until the global financial crisis and Euro-Debt market crisis, the fast growing countries, such as Australia, China, Hong Kong, Korea, Singapore, and Spain, saw a large number of new IPOs, which increases total share in the capital market. Many older European economies, and other capital markets in the developing

[3] The panel-level descriptive statistics are also computed, and shown in Appendix 3 due to space constraints.

economies, such as Columbia, Czech, and Mexico, saw stagnation or mergers into bigger companies.

In Table 2b, the number of listed stocks in some cases decreases due to stringent liquidity conditions used in our study, which retain only liquid stocks with weekly trading data. During the global financial crisis and after that, many smaller stocks in developing countries saw a huge drop in trading volumes and liquidity.

In Table 2c, we see that the industry Herfindahl indices of many countries decrease over the years signifying a more diversified economy. China, Thailand, Germany, and Holland show noticeable decreases. However, other countries, such as Denmark, Finland, South Africa, and Taiwan show noticeable increases in the IHHI. Decreases in most countries' firm level Herfindahl index signifying the dominance of a small number of firms in the economy in terms of decreased sale revenues over time. There were a few exceptions in both the developed and the developing economies, such as Denmark, Finland, Singapore, Czech, Greece, Malaysia, South Africa, and Taiwan. Across the broad groupings of developed versus developing countries, IHHI was markedly higher for developing countries except for more recent years since 2010. On the other hand, developing countries have on average unequivocally higher IHHI's compared to those in developed economies. This shows systematic differences in industry and business market structures of developed versus developing economies.

In Table 2d, the good government index GGI of more of the developing countries falls or stays about the same level over the years excluding Brazil, China, India, Pakistan, and Thailand. On the contrary, GGI for most of the developed countries increases or stays about the same level over the years, except for Austria, Holland, Japan, and Portugal that see decreases. If GGI is an important explanation of international differences in R^2, particularly with respect to developed and developing countries, this explanation continues to be effective in the years following 1995 after MYY's study.

For individual country's market index volatility IVOL, it is interesting to note that while those in the developed economies tend to rise; those in the developing economies tend to fall. Volatility in the developing economies in the 1990's is relatively higher than in the developed markets. By 2010, their volatilities pull to about the same levels. Most of the volatility changes appear to take place around and after the global financial crisis periods in 2007 and 2008. The average firm capitalizations do no increase as large as per capita GDP in most cases. There is an even spread of increases, as well as decreases in average capitalizations in both the developed and developing economies. There are no trend differences in average capitalizations between the two groups of countries, which explain the cross-sectional disparity issue in R^2.

4. Empirical Methodology and Findings

In this section, we extend MYY (2000)'s results for all years from 1995 to 2012. We use the log-transforms of error-weighted R^2 (ERW) and equal-weighted R^2 (EQW) as alternative dependent variables in the regressions, and analyze the substantive impact of GGI on the two response variables. Other explanatory variables are included to explain the cross-sectional variations across countries. Finally, we provide possible alternative explanations for the disparity in R^2 across countries.

4.1. Extending MYY's results

The first part of the empirical analyses replicate and extend the results in MYY (2000), which use only the cross-sectional data in 1995. We estimate the R^2 regressions to examine both cross-sectional and temporal variations in the GGI variable for a panel of 40 countries on a year-by-year basic controlling for various macro-economic and firm-level fundamentals. The generic empirical framework is set up as follows:

$$\Upsilon_{jy} = \mathrm{a}_0 + b_1 GDP_{jy} + b_2 NSTK_{jy} + cX_{jy} + \delta GGI_{jy} + \zeta_{jy} \tag{7}$$

where GDP_{jy} is the natural log of per capita GDP of country j in year y; $NSTK_{jy}$ is the log-number of stocks in country j in year y which represents the economic scale or size of economic activities; GGI_{jy} is the good government index, which is a proxy for the level of property rights protection in a country; and X_{jy} is a vector of the structural variables including GEO_j, the logarithm of geographical area in square kilometres (km^2) of country *j*, macroeconomic risk proxy, $VGDP_{jy}$, the Herfindahl indexes, $IHHI_{jy}$ and $FHHI_{jy}$, and the earnings co-movement index, ECI_{jy} . The regression parameters are denoted by constants a_0, b_1, b_2, δ, and constant vector *c*. ζ_{jy} is assumed to be an i.i.d. error term for every j in each year y, when we employ OLS.

In terms of empirical methodology, we make two extensions to the earlier empirical works of MYY (2000) and Jin and Myers (2006). First, we extend the sample periods covering 1995 to

2012,[4] and we have 18 years of cross-sectional results in comparison with MYY's 1995 study. We run both cross-sectional and time series analyses on this panel data. Second, as additional robustness checks, we employ an alternative dependent variable in the form of the log-transform of an equal-weighted aggregate R^2 in addition to that of error-weighted R^2 employed in MYY. In particular, we run two pairs of cross-sectional regressions on Equation (7) for each year: one with LERW as dependent variable, and another one with LEQW as dependent variable. The results are reported in Tables 3a and 3b.

[Insert Tables 3a and 3b here]

MYY (2000) show that the control and structural variables, such as GDP, NSTK, GEO, VGDP, IHHI, FHHI, and ECI, explain only partially the high correlations of the fundamental influences in the low-income economies. The correlations of fundamental influences possibly give rise to higher synchronicity or R^2 in their stock markets. However, when they include GGI in the model, they found that GGI explains away the R^2 variations correlated with GDP, and the GGI is significantly negative in the model. Their results support an institutional story that a government's weak protection of property rights causes high stock return synchronicity in the sample countries.

We extend MYY's model in Equation (7) by using year-by-year data from 1995 to 2012, and find that without GGI, GDP has a negative impact on the dependent synchronicity variable with significance at a 10% level in 10 out of 18 years for LERW, and 6 out of 18 years for LEQW. However, when we include GGI as an explanatory variable, the results in Tables 3a-3d show that GDP coefficient becomes insignificantly different from zero, but the coefficient of GGI is significantly negative at the 10% level in all cases for the LERW models, except for year 2011. The GGI coefficient is also significantly negative at the 10% level for the LEQW models, except for years 2010 and 2011.

In Jin and Myers (2006) study, they show that after controlling for GDP and stock market size, as represented by the total number stocks listed on a market, NSTK, stock return synchronicity is higher in countries where firms are more opaque. Like Jin and Myers, we add the country stock market index volatility, IVOL, as a structural explanatory variable representing macroeconomic risk in a country, to the cross-sectional price synchronicity models. The local stock index data are obtained from Datastream. In Tables 3c and 3d, when IVOL is included

[4] MYY (2000) use only cross-section data in 1995, whereas Jin and Myers (2006) estimate the models using year-by-year data for the periods from 1990 to 2001.

in the cross-sectional regressions, GGI remains significantly negative, while IVOL itself is significantly positive in 9 out of 18 years for LERW, and in 10 out of 18 years for LEQW. The estimated IVOL coefficient is consistently positive for all cases indicating that market volatility adds new information to price synchronicity.

[Insert Tables 3c and 3d here]

4.2. Emerging versus developed market regimes

To further understand the relationship between price synchronicity and property rights, we plot error weighted R^2 (ERW) against GGI for the 40 countries for 1995, 2000, 2005, and 2010. The 40 countries

[Insert Figures 1a, 1b, 1c, and 1d here]

Figure 1a shows that in 1995, the developed countries (solid dots) cluster on the right bottom of the graph, whereas the developing countries (circles) spread out to the left with a few on the left top corner of the graph. In particular, the left uppermost point represents China, whereas the lowest point on the far right represents US, which are the two distinctly polar economies in 1995. There are other explanatory variables that seem to explain the cross-sectional variations in ERW or LERW in addition to the control and structural variables. If these other explanations are weaker, then GGI would appear to be able to partition the cross-section of points into two clusters, such that one on the left (the developing countries) has high ERW R^2 and the other on the right (the developed countries) has low ERW R^2.

This helps us understands why the regression model in Equation (7) produces a significantly negative slope on GGI. This international R^2 disparity phenomenon could be explained by other economically meaningful variables that divide the two groups of countries into a left and a right partition. These economic variables partially explain the disparity in the international R^2's. However, over time, as seen in particularly in Figure 1d, the R^2's of the two groups of countries become more similar, though the GGI differences persist. For the other variables that are effective in explaining cross-sectional variations of R^2's, their plots with ERW and EQW are rather similar to the Figures 1a-1d.

Chan and Hameed (2006) show that in emerging markets, if firm size were correlated with price synchronicity, high price synchronicity is likely to be linked with high analyst coverage.

Chen, Goldstein, and Jiang (2007) use firm size to partly explain price informativeness. We conjecture that the divide between emerging markets and developed markets is correlated with the market size effects. We test the hypothesis by using two proxies for market size effects, which include the total number of stocks, NSTK, and the average firm capitalization, ACAP,; and both variables measure economic size and activities in a country, which are also correlated with the extent of analysts' coverage.

4.3. Market Size Effects

We explore the market capitalization effects by splitting firms into 10 deciles by market size for country j, and in year y. We aggregate firm-level R^2_{djy} by decile, and make the usual log-transformation of EQW R^2 for each decile in j and year y is defined as $\Upsilon_{djy} = \log\ R^2_{djy}/(1 - R^2_{djy})$.

The country-year cross-sectional regressions in Equation (7) (as in Tables 3a to 3d) produce overly restrictive single constant coefficient, γ, which could cause misspecification on the explanatory relationship between $ACAP_{djy}$ and Υ_{djy}. We relax the constraint on the $ACAP_{djy}$ coefficient being a constant across d and j using the panel structure, where includes 400 coefficients $\gamma_{d,j}$ for d=1,2,3,…,10 for the 10 deciles and j=1,2,….,40 for each of the 40 countries. Thus, instead of having only 40 sample points in the cross-sectional country-level regressions, we now run regressions using a sample size of 40 × 10 (40 countries each with 10 deciles) over 18 years using the following decile-based panel regression specification:

$$\begin{aligned}\Upsilon_{djy} = \mathrm{a}_0 + b_1 GDP_{jy} + b_2 NSTK_{jy} + cX_{jy} + \delta GGI_{jy} \\ + \textstyle\sum_{j=1}^{40}\sum_{d=1}^{10} \gamma_{dj}\ ACAP_{djy} + \rho IVOL_{jy} + \theta LSCI_{jy} + \zeta_{djy}\ . \qquad (8)\end{aligned}$$

where Υ_{djy} is the log-transform of EQW R^2 for each decile in country j and year y; and we include log of equal-weighted firm capitalization, $ACAP_{djy}$, of all firms in decile d of j in year y. In regression (8), a constant coefficient γ is employed for all $ACAP_{djy}$ explanatory variables. For different decile Υ_{djy} in the same country j and year y, the explanatory variables of GDP_{jy} , $NSTOCK_{jy}$, X_{jy} , GGI_{jy}, and $IVOL_{jy}$ have the same values. These values differ by j and by y. As the disturbance term ζ_{djy} may be heteroskedastic across deciles, we perform the least squares regression on (8) for each year during 1995 – 2012 considering different variances in the disturbance error terms in different deciles.

If market size is irrelevant, we should not expect the disaggregation of Υ_{jy} in Equation (7) into Υ_{djy} in Equation (8) to alter significantly the nature of the impact of GGI according to the information hypothesis in MYY. The level of investors' property right protection in a country should affect all firms in the country consistently, and thus the GGI explanatory variable should have the same negative impact on each Υ_{djy} for different deciles. This is the same approach used in Pantzalis and Xu (2008), who study issues on information using US sample. The results are summarized in Table 4. The "goodness of fit" (adjusted R^2) of the decile-based cross-sectional models improves significantly relative to the country-level LEQW model in Equation (7). Apparently, the disaggregation into decile groups improves the explanation of the dispersion in R^2's across countries. There is substantive variation in the within-country decile R^2's that justifies the explanation by firm sizes in conjunction with other structural variables. The GDP coefficient retains the correct negative sign in almost every year except for 2009. The GGI coefficient is significantly negative at 1% level in all the years. Similarly, the IVOL coefficient is significantly positive at the 1% level for 15 out of 18 years. It is significantly positive at the 2% level for 2007. More interestingly, the ACAP coefficient estimates are significantly positive in all years at less than 1% significance level. The positive ACAP coefficient indicates that larger firm lead to higher firm R^2, and hence contributes to the higher overall R^2 of the country. The effect appears to be the same and robust across both developed and developing countries.

[Insert Table 4 here]

4.4. Robustness Tests - Panel Regressions

Instead of running the country-level cross-sectional OLS models across different years, we estimate Equation (8) as a country-year panel model. We consider the same set of control variables, such as GDP and NSTK, and the structural variables of GEO, VGDP, IHHI, FHHI, and ECI. We also include three additional explanatory variables: GGI, ACAP, and IVOL, and also year fixed effects, ψ_y, to the model. The new model specification is as follow:

$$\Upsilon_{jy} = \mathrm{a}_0 + b_1 GDP_{jy} + b_2 NSTK_{jy} + cX_{jy} + \delta GGI_{jy} + \gamma ACAP_{djy} + \rho IVOL_{jy} + \psi_y + \zeta_{jy} \quad (9)$$

The country-year panel regression results in Columns (1) and (2) of Table 4 are robust reaffirming the negative correlations between GGI and R^2 as found in the early results of the country-level cross-sectional models as in Table 3(c) and 3(d). We find that the GGI coefficients are statistically and economically significant in the models; and the sign of the coefficients are negative. The GGI explain about 2.7% and 3.3% of the variations in the country-level LERW (error-weighted R^2) and LEQR (equal-weighted R^2), respectively. The IVOL coefficients are significant and positive across the models, which are also consistent with the early country-year models. We note that IVOL and GGI coefficients are not mutually exclusive, and both appear to be consistent and robust in the models. The results do not reject the opaqueness hypothesis of Jin and Myers (2006) that argues that the market opaqueness is a necessary condition for the negative effects of weak property right protection on price informativeness; and both are significant factors in explaining the variations in price synchronicity, though in the opposite direction.

In contrary to the distinct divisions between the emerging economies and the developed economies shown in Figures 1 (a) to (d), we find that the three market structure variables that represent both firm size (ACAP) and market concentration (IHHI and FHHI) are insignificant in explaining the international disparity of price synchronicity in the country-year panel regressions. The results seem to imply that the structural divides between emerging countries and developed countries are not correlated with the market capitalization (ACAP) and competitiveness (or concentration) of firms (FHHI) and the industry (IHHI) in the country. There are two possible reasons why firm size and market concentration fail to explain cross-country disparity in $R^{2'}$s: (1) the country-level panel models are too coarse to capture the between-the-countries effects in size and industry structure; and (2) the structural divides between developed and developing countries could be related to the maturity and integration of industries within the country.

A recent paper by Eun, Wang, and Xiao (2014) shows that cultural differences across countries could explain the cross-sectional disparity in country R^2's. The findings are highly plausible on the premise that cultural differences, to some extent, correlate with the globalization and developmental states of a country. We further conjecture a non-information-based hypothesis that firms in large markets attract more institutional fund flows, and greater security analyst coverage (Chan and Hameed, 2006; Kelly, 2014). The hypothesis, if not rejected, should predict a strong correlation between stock return R^2 and market capitalization (size), i.e. we should expect a positive and significant ACAP coefficient in the models.

We estimate the decile-country-based panel regression model by adding the country fixed effects (Columns 3 and 4) to capture unobserved county-level differences, (such as cultural differences); and the decile fixed effects (Columns 5 and 6) to capture size-related fixed effect. The new regression specification is as follows:

$$\Upsilon_{djy} = \mathrm{a}_0 + \sum_{j=1}^{38} \alpha_j 1_j + \sum_{d=1}^{9} \beta_d \, 1_d + b_1 GDP_{jy} + b_2 NSTK_{jy} + cX_{jy}$$
$$+\delta GGI_{jy} + \sum_{j=1}^{40} \sum_{d=1}^{10} \gamma_{dj} \, ACAP_{djy} + \rho IVOL_{jy} + \theta LSCI_{jy} + \zeta_{djy} \qquad (10)$$

where the indicator 1_j denotes 1, if a dependent variable is associated with country j; and 0 otherwise; and the indicator 1_d denotes 1, if dependent variable is associated with decile d; and 0 otherwise. Regression (10) is therefore a panel regression involving time series as well as cross-sections of the country-decile variables. The sample values of the dependent variable for regression (10) is a stacked vector of $\left(Z_{1995}\, Z_{1996}\, Z_{1997}\ \dots\ Z_y\ \dots\ Z_{2011}\, Z_{2012}\right)^T$ where each (400×1) Z_y is $(\Upsilon_{11y}\ \Upsilon_{2,1y\dots}\Upsilon_{d1y\dots}\Upsilon_{10,1y}\ \Upsilon_{1,2y\dots}\ \Upsilon_{10,2y}\ \Upsilon_{1,3y\dots}\Upsilon_{10,3y\dots}\Upsilon_{1,40y\dots}\Upsilon_{10,40y})^T$. To avoid singularity, we exclude the tenth decile dummy, and two country dummies (since GEO variable is constant for each country). To ensure that the panel regression results are adequately interpreted, we follow the method of Petersen (2009) to adjust the standard errors of estimates by checking if the residual errors of the panel data regression are correlated. Both within-country cluster and within-decile cluster correlations are considered. The empirical results of the regression are reported in Table 5.

[Insert Table 5 here]

The sample size for this regression is 400 × 18 years or 7200. The adjusted R^2 for the decile-country-based panel regressions increase to between 0.466 and 0.506 compared to the adjusted R^2 of around 0.186 and 0.193 (Columns 1 and 2) in Table 5. It is clearly the case that the restrictions: $(\gamma_{dj} = \gamma)$, for all d and all j, can be rejected. The relaxation of these restrictions increases the fit in Equation (10) tremendously relative to the regression in Equation (9).

In Table 5, the ACAP coefficient is highly significant and positive at 1% level in model where the country fixed effects are controlled (Columns 3 and 4), and when both the country and decile fixed effects are controlled. GGI and IVOL coefficients are both positive but not significant at less than a 10% level. It seems to suggest that unobserved within-the-country and within-the-firm-decile variations could explain away some of the between-the-country price synchronicity effects that are associated with market opaqueness, (IVOL), and weak property right protection, (GGI). However, the results on the highly statistically and economically significant ACAP coefficients (Columns 3 to 6) imply that the unobserved within-the-country and within-the-firm-decile variations are uncorrelated with the average capitalization of firms in the countries.

A closer examination into the decile dummies (results not reported) shows that developed countries' first decile coefficients are more negative than developing countries' coefficients. The regression results are consistent with the initial observations of Figures 2a, 2b – that there is a distinct difference in the impact of decile capitalization on the associated R^2. In the developed countries group, on average, only the first six deciles or the largest firms evidence positive coefficients, whereas in the developing group countries only the last decile or the smallest firms may evidence negative coefficients. Thus, developed countries' overall R^2 is lower than the developing countries' overall R^2. The results imply that smaller firms contribute less to aggregate R^2 than the larger firms do in all countries. Given that smaller firms have fewer analysts following than large firms, the results seem to be inconsistent with the information hypothesis that smaller firms are informationally more efficient relative to larger firms.

4.4.1. Sector-Country-based Panel

We further investigate the relationship between within-the-industry sector variations and price synchronicity using the sector-country panel. We group the sample firms into 30 industry sectors based on the Fama-French industry classifications (See Appendix 2). Both the country and the industry sector fixed effects are controlled for; and the results are reported in Columns (7) and (8) of Table 5. The models' goodness-of-fit remains reasonably strong at between 0.371 and 0.423.

By extending the observations from 720 in the decile-country panel to 15,218 in the sector-country panel, the results show that ACAP coefficients are still significant and positive. We could not reject the market size effects in explaining the disparity of international R^2. The market opaqueness variable, IVOL, is positive but statistically insignificant; and the GGI coefficients are still significant, but the sign changes from negatives as in the earlier country-panel regressions (Columns 1 and 2) to positives in after controlling for sector-country fixed effects. It suggests that GGI is no longer proxy for the information-based effects. The weak GGI increases price synchronicity for countries with larger firms. The size effect is not linked to information opaqueness, IVOL, neither correlated with industry and market structures, IHHI and FHHI.

4.5. Alternative explanations of stock return synchronicity

The country-year panel models are the only models thus far that produce results (Columns 1 and 2 of Table 5) that do not reject the information hypothesis of MYY. However, the MYY's hypothesis could not withstand the robustness tests that allow for unobserved decile-based and industry sector-based variations. The information based results disappear, when we disaggregate R^2's by portfolios of stocks and include different average capitalizations in each country in our models. The negative explanatory relationships of GGI and R^2 become insignificant, when we control for the within-the-decile and the within-the-sector variations in the panel regression models. In the sector-country panel models, GGI remains significant but the sign becomes positive. There are three possible explanations for the positive GGI and R^2 relationship.

One is the information reason related to a conjecture on how financial analysts report on firms. Chan and Hameed (2006) find that stocks with low return R^2 are smaller in capitalization, with low institutional ownerships and less analyst coverage and liquidity. As large firms tend to attract more security analyst coverage, and security analysts are efficient processors of market-wide information, stock returns are more synchronous in large markets. Although their study deals with emerging markets, a similar argument could be extended to all countries. Chan, Hameed and Kang (2013) elaborate on the liquidity association with systematic volatility and beta; but this explanation is different from equating high R^2 with low information efficiency and low R^2 with high information efficiency.

Another is the investor sentiment reason of Hou, Peng and Xiong (2013). Retail investors tend to over-react to information in smaller capitalization markets. Small capitalization markets attract more sentiment driven activities that cause strong medium-term price momentum that are uncorrelated across stocks. Therefore, small capitalization markets are likely to have low stock return R^2. This explanation is, however, opposite to equating high R^2 with low information efficiency and low R^2 with high information efficiency.

Yet, another possible explanation that is related to the information efficiency, but related to corporate structure and industry integration, which have been investigated in the extant and ongoing research, but with inconclusive outcomes. For example, Khanna and Thomas (2009), in an empirical study of Chile that uses a unique data set, posit that synchronicity is strongly correlated with interlocking directorates. The presence of joint directors could be associated with either reduced firm-level transparency or increased correlation in firm fundamentals, such as joint resource allocation across firms.

We further extend this type of argument to industry integrations. For developing countries, increased firm capitalizations may lead to more investments in vertical and horizontal integrations, and thus increased R^2's, since listed firm's stock prices are more tightly knitted. For developed countries, increased firm capitalizations, however, lead to more diversity and horizontal competition of industries. This would reduce R^2's, since firms are more diversified. Stuckey and White (1993) suggest integration is another impetus in a market, when it is young and less developed. Developed countries typically have anti-trust laws to prevent large firms from pursuing too much vertical integration. Firms in well-developed markets do not find it advantageous, but find it too costly to integrate downstream. D'Aveni and Ilinitch (1992) postulate that firms in markets with a high degree of vertical integration have high systematic and credit risks. Thus, high integration is connected with the observation of high price synchronicity in developing countries.

To explore the industry integration explanation, we find out more about the characteristics of the various decile portfolios in each of the 40 countries. For each decile portfolio, the time-dependent average beta, $\hat{\beta}_{1,ij}$, is computed for stock in each decile portfolio using Equation (1). The betas decrease more sharply for smaller sized firms in the developed countries. For developing countries, the betas of smaller firms (4th to 10th deciles) are more similar in values and do not fall as sharply as in the developed countries. We plot the sum of time-averaged estimated coefficients $\hat{\beta}_{1,dj} + \hat{\beta}_{2,dj}$ in years 1995-2000, 2001-2006, and 2007-2012 versus the 1st decile to the 10th decile in terms of firm capitalizations in each of 16 developed countries, as well as the developing group of countries in Figures 2a and 2b.

[Insert Figures 2a, 2b here]

The systematic risks including international influences of the US stock market are considered in the sum of time-averaged coefficients $\hat{\beta}_{1,dj} + \hat{\beta}_{2,dj}$. Figure 2a shows that the market impacts on stock returns are the strongest for the largest stocks. The slope of the graph is negative. However, for Figure 2b, the developing countries show stylistically a much smaller slope. This means that the stocks relate to the market systematically in about the same way regardless of firm size. We do not think the information reasons could be solely adequate in explaining such stylistic differences across international stock markets.

5. Does Industry Integration Matter?

5.1. Measuring Industry Integration

For each country every year from 1995 to 2012, we compute the sample correlation of every pair of weekly returns of firms in each decile. We next average the sample correlations of all firms in the same decile per year per country. Table 6 shows that the average sample correlations decrease with firm size for all countries; and the average sample correlations are consistently larger in the developing countries than in the developed countries. Developing country firms in the lower deciles have markedly larger within-decile correlations than firms in the developed countries. More pronounced differences are observed in the lower deciles than in the higher deciles. Higher correlations contribute to a higher R^2, hence, it is not surprising how developing firms in general have higher price synchronicity. There appear to be more diversification benefits in developed economies than developing economies. The diversification of returns appears to be more correlated with relative capitalization sizes and industry structures than the information models. We explore this further.

[Insert Table 6 here]

It is difficult to find suitable variables in the literature to measure directly the effects of industry integration in country. Based on the pair-wise correlations, we propose a new industry integration index. For every year from 1995 to 2012, we compute the pair-wise correlations of weekly returns for all sample firms for each country. For firms in the three largest deciles, we multiply the numbers by the corresponding value weights to derive at the "Large Decile Correlation Index" (LDCI); and in the same way, we compute the average correlation index for the firms in the smallest three deciles, and derive the "Small Decile Correlation Index" (SDCI) for each country. The LDCI and SDCI numbers are organized according to correlations within industries and are value-weighted; and they are not the same as the decile correlation numbers in Table 6. We do not include the middle 4 deciles in each industry to avoid constructing a variable that is highly correlated with aggregate country ACAP each year or with IVOL. The middle industry deciles also tend to be similar across countries and may not provide as much variability.

From Table 7, it seems that many developing countries had higher LDCI as well as higher SDCI than developed countries. Amongst the developing countries, China, India, Malaysia, Turkey, and Thailand had some of the highest LDCI and SDCI. High indexes indicate concentration of industries with high linkages within the country. By 2000, developed countries, such as US, UK, Sweden, Austria, Canada, France, and Germany, have some of the smallest SDCI indicating that smaller capitalized firms in the developed countries operate in industries that have low within-industry correlations. High within-industry correlation is consistent with a high level of vertical and horizontal integration or inter-connectedness of firms within similar industries. Fan, Huang, Morck, and Yeung (2017) report that Chinese firms in the 2000's are more vertically integrated than US firms previously. This could be due to the weaker legal structures and higher transaction costs in business-to-business dealings. Vertical integration can circumvent some of these costs. Barney (2002) argues that industry integration is practiced in many developing countries without clear anti-trust laws as a corporate strategy to gain competitive advantage. Examples are in Brazilian aluminum industry and other mining industries in South America.

[Insert Table 7 here]

Based on the correlation indices of the size-based decile portfolios, we compute two different measures for industry integration. The first composite index takes the averages of LDCI and SDCI, which is defined as [DMCI = (LDCI + SDCI)/2]; and the second index is computed as a range indicator, which takes the differences between the LDCI and SDCI, which is defined as [DSCI = (LDCI – SDCI)]. We use the two integration measures in this study to capture some aspects of this integration tendency. Industry organization structures and state of industrial and business market development are different according to the density of competitive firms in each country. However, there appears to be a general systematic divide between developed and developing countries.

Based on the Fama-French's 30 industry categories (Appendix 1), we compute the correlation indices for firms in each of the 30 industry sectors, and derive the largest sector-based correlation index, LICI, and the smallest sector-based correlation index, SICI. We also use the same methodology as in the decile-based indices to derive the two industry sector-based integration measures, which are denoted as [IMCI = (LICI + SICI]/2) and [ISCI = (LICI – SICI)], respectively.

5.2. *Industry Integration Explanation for Price Synchronicity*

We next test if the industry integration indices could explain the price synchronicity issue by running various panel LERW and LEQW regressions on the key explanatory variables, which include GGI, IVOL, and LSCI, together with other control and structural variables. This regression specification with a sample size of 400 each year adds industry integration indices, including the decile-based indices, $DMCI_j$ and $DSCI_j$, and the sector-based indices, $IMCI_j$ and $ISCI_j$, as explanatory variables to (10).

We run the 400 observations country-based panel regressions of stock price synchronicity following Equation (10) on economy variables across 40 countries and over 18 years from 1995 to 2012. We then expand the number of observation to 7,200 by running the 10-decile, 40-country and 18-year panel regressions. As an extension to the panel regressions in Table 5, we add additional explanatory variables, [$DMCI_j$ and $IMCI_j$] and [$DSCI_j$ and $ISCI_j$], separately to the models; and the results are reported in Tables 8(a) and 8(b), respectively. The adjusted R2 shows that the goodness-of-fit increases across all the panel models relative to the models in Table5.

[Insert Tables 8(a) and 8(b) here]

We find that the coefficients on GGI, IVOL, and ACAP are consistent with those reported in Table 5; and the estimated coefficients on $DMCI_j$ (Columns 1 to 6) and $IMCI_j$ (Columns 7 and 8) are significantly positive at less than 1% level in all the panel models. DMCI and IMCI explain incrementally cross-sectional variations in price synchronicity, which are not correlated with property rights, information opaqueness and market size factors. The performance is slightly better in the LEQR models than in the LERW models; and the range-based industry integration indices, $DSCI_j$ and $ISCI_j$, explain more variations in the price synchronicity in the models relative to the medium-based industry integration indices, $DMCI_j$ and $IMCI_j$. Like in Table 5, GGI and IVOL are only significant in the country-panel models (Columns 1 and 2 of Table 8(a) and (b)), in explaining international disparity in LERW and LEQR on at the cross-country level. The effects of (negative) weak property right and (positive) information opaqueness are explained away by the industry integration indices and the average market size factors, ACAP, at both the decile and industry panel regressions (Columns 3 to 8). The market size variable is consistently positive across the models, but the size factor is not correlated with industry structure at the firm and industry within the countries.

We offer an alternative and complementary reason of why the R^2 disparity occurs internationally by suggesting a non-information explanation that is related to corporate and industry structures of integrations. Our industry integration indices are apparently less coarse than the Herfindahl indices (measuring market / industry concentration), and thus enables us to capture the effects of industry compositions and intra-industry firm correlations. By using different ways to represent the pair-wise return correlations of firms in the largest-decile and the smallest-deciles, and in largest-sectors and the smallest-sectors by industry, the proposed indices capture vertical and horizontal integrations within the country and industry, which are not captured by the MYY"s hypothesis of property right factor that is significant only at the cross-country level. At within-the-country level, what matter most in explaining price synchronicity within-the-country is the industry composition and integration.

5.3. Robustness Tests

For robustness checks, we run the panel regressions on (9) to test interactions between the industry integration and GGI, and summarize he results in Table 9. The results show that all the coefficients on the industry integration indices and the market size variables are significantly positive; and the GGI coefficients are only statistically significant in the sector-based panel models with a positive sign (Columns 5 to 8). The market opaqueness coefficients, IVOL, are insignificant in all the models. The results imply that stock returns are highly synchronous in markets where firms are highly inter-dependent in their business and industry interactions, and the business and industry integration effects are reinforced by strong property right protection. The results show that in countries where industry integrations and property right protection are strong, firms' stock prices move more synchronously relative to countries with low property right protection and lack of horizontal and vertical integration among firms. In other words, the within-the-country variations in stock price R^2 increases when the industry structure is more highly inter-dependent and the property right protection is stronger.

[Insert Table 9 here]

We next use a "GFC2008" year dummy to represent the post-global financial crisis shocks on the industry integration structure in the sample countries. The dummy "GFC2008" has a value of 1 for the period after 2008; and 0 otherwise. We interact the dummy with the industry integration indices, both decile-based and sector-based indices, in the panel regression models controlling for GGI, IVOL and ACAP together with other control variables. The results are summarized in Table 10. We find that the industry integration indices, ($DMCI_j$ and $DSCI_j$) and

($IMCI_j$ and $ISCI_j$), are significantly positive in explaining the price synchronicity at both the decile-country (Columns 1 to 4) and sector-country (Columns 5 to 8) models. However, the interactive terms, ("GFC2008×gMCI" and "GFC2008×gSCI"), where [g = (D, I)], are insignificant. The results imply that the effects of industry integration are not subject to the transitory shocks. The coefficients on GGI, IVOL and ACAP are consistent with the results of the panel regression models in Tables 8(a) and 8(b).

[Insert Table 10 here]

In the early panel models, we use the value-weighted aggregate correlation indices at the country level. We next derive the average country-decile, $DACI_{d,j}$, and the average country-sector correction indices, $IACI_{s,j}$, where the subscript "d,j" and "s,j' denote the decile-country-based and sector-country-based averaged indices, respectively; and use the indices to proxy the level of industry integrations in the decile-country and sector-country panel models. The results in Table 11 again affirm that the industry integrations, both the decile-country and sector-country indices, significantly increase the price synchronicity. The decile and sector-adjustments of the indices are uncorrelated with the market capitalization effects, and the ACAP coefficients are still positive and statistically significant in all the models; and GGI coefficients, are significant only in the industry sector-country panel, which is consistent with the early results.

[Insert Table 11 here]

The last robustness tests involve further disaggregation of the decile-country to firm-country level, and the sample size is expanded significantly from 7,200 observations to 475,701 firm-country-year observations. We re-estimate the panel regression models by clustering the errors at the country, sector and year levels, and the results are shown in Table 12. We find the industry integration indices are all significant and have positive effects on the price synchronicity in all the models, regardless whether we use the aggregate country-level indices, (DMCIj, DSCIj), and/or the average decile-country-level indices, ($DACI_{d,j}$), and the average sector-country-level indices, (IACIsj). The market size, ACAP, and the property right protection, GGI, coefficients are also significant and positive; but the IVOL coefficients are statistically insignificant in all the models. The results show that industry integration is a robust and significant factors that could explain disparity in the price synchronicity within the country, and the effects are uncorrelated with market size and GGI of the countries. Therefore, our results in all levels: the country-level, decile-level, sector-level and firm-level, are consistent and all point to the fact that high integration in industry structure, both horizontally and vertically, where firm prices are highly correlated, could have positive effects on the within-the-country stock return synchronicity. The industry integration story offers an alternative explanation to the price synchronicity story of MYY, which is not based on the information hypothesis.

[Insert Table 12 here]

6. Conclusions

Since the seminal study by MYY (2000), the information efficiency story has been widely accepted in explaining differing stock price synchronicity across countries. MYY explain that in countries with poor government's protection of private property rights, as represented by GGI, risk arbitraging activities are unattractive and infeasible, because inter-corporation shifting of income is widespread, which reduces incentives of investors to expend efforts in extracting firm-specific information. Therefore, we expect more investors in low GGI markets to trade on market-wide information, which increases price synchronicity in the markets. MYY supports the information hypothesis when they found a negative relationship between aggregate country-level stock price synchronicity and GGI, and the GGI explanatory effect is independent of those from other structural economic factors. Jin and Myers (2006) argue that the negative stock return R^2 and GGI relationship is only valid in an opaque market, where information asymmetry exists. Chan and Hameed (2006) relying on MYY's information hypothesis show that in low GGI countries, greater security analyst coverage is correlated with high stock price synchronicity. They postulate that security analysts generate more market-wide information than firm-specific information, which as a result, reduce variations in stock prices.

However, the information hypothesis (not the disparity in international R^2) has been challenged in recent years by several studies. Dasgupta, Gan and Gao (2010) argue that market transparency reduces the information inefficiency, such that time-variant information of firms is processed prior to the occurrence of events, which will not thus reduce price synchronicity in the market. Hou, Peng and Xiong (2013) find that there is no definitive theoretical construction to suggest that if rational investors receive more firm-specific information, they generate more idiosyncratic return variance. Therefore, they reject the price synchronicity and information efficiency relationship. They also show that if investors are sentiment driven, information inefficiency is captured by the serial correlation stock returns resulting in strong momentum in medium-term stock prices and low R^2 in stock returns. Both of these findings are at odds with use of the information hypothesis in explaining the disparity in international R^2. Other studies such as Ashbaugh-Skaife, Gassen, and LaFond (2005) and Pantzalis and Xu (2008) also refute the association of stock price synchronicity with stock price informativeness.

Our study aims to add to the understanding of price synchronicity by relooking at the good government index puzzle in explaining stock return R^2. We ask the question if the negative price synchronicity and GGI relationship could be explained by other factors that are not related to MYY's information hypothesis or information theorizing in general. We replicate the empirical analyses of MYY (2000) using sample firms from the same 40 countries, but extend over a longer period from 1995- 2012. We find that GGI is consistently significant and negative for all periods except 2010 and 2011. The explanatory effects of GGI appear to become less effective after the global financial crisis. We also find that country market index volatility, like GGI, is a significant explanatory variable for the cross-sectional country-level regressions. For robustness checking of the results, we employ corrections for heteroskedasticity as well as using an alternative measure of equal-weighted than just error-weighted R^2.

However, by disaggregating into size deciles of firms within each country and the R^2's of these portfolios of firms, and employing panel regressions, we are able to discover new findings explaining variation of R^2's within country and also variations of R^2's across countries. GGI becomes insignificant in explaining these variations. We verify this result by varying the control and structural variables for robustness checking. It is found that market size (ACAP), and industry structure variables in different countries could significantly impact price synchronicity in a differential way across countries. Clearly smaller (capitalization) firms in all countries have smaller contributions to a country's weighted R^2 compared with the larger firms in the same country. This does not support the information hypothesis. The result does not necessarily have to do with whether the market is informationally efficient or less so. The result of having smaller R^2 for smaller firms that may be deemed to be less informationally efficient is, however, consistent with Hou, Peng and Xiong's (2013) conjecture that investors in large markets are less sentiment driven compared to the investors in small markets, which are more likely to over-react to information. However, we also show that systematic risk and loadings are also associated with the firm size effects at the same time. The systematic risk may not be related to any informational or sentiment story.

The differential nature of the correlation structures and beta coefficients in developing countries versus developed countries points to other factors explaining the issue of the disparity in international R^2's across countries. We derive the correlation indices using stock prices, and compute the value-weighted indices at the country level to proxy the level of industry integration of the sample countries. When we include the industry integration variable in our panel regression, we find that the industry integration variables are statistically significant in explaining stock return synchronicity at the decile-country and sector-country panel models. We also find that the inclusion of the industry integration variable does not explain away the effects of market size in the models, but good government index, GGI and stock market volatility, IVOL, variables become insignificant in the models. GGI is significant, but has a positive sign in the sector-country panel models. The results offer an alternative explanation to the international disparity in R^2 puzzle, which is not related to information hypothesis. We find that stork prices of firms in countries that have highly inter-dependent structure tend to be more synchronous than firms in countries where the industry is less structured and weakly integrated.

Firms in economies that are generally more inter-connected and inter-dependent grow in size with more vertical and horizontal integrations. Thus, R^2 will generally be higher in these relatively less developed economies, after accounting for capitalization size. In the developed economies, most firms will grow with some degree of diversity and horizontal expansions globally, so capitalizations will contribute negatively to a decrease in aggregate country R^2. Averaging across all R^2's in an economy will produce the disparity in R^2's across countries. The explanatory effects of the industry integration indices are robust to withhold a battery of diagnostic tests, and they are consistently significant and positive in all the models in explaining the within-the-country R^2 variations.

The above explanation of the disparity in R^2's does not require any argument whether the stock market is informationally efficient or less informationally efficient given financial analysts' report and research as long as there is some price impact. It also does not need to assume that if the analysts in the less developed countries report more of macroeconomic news and less of firm-specific news. Reporting of macroeconomic news will drive more of the larger firm stocks than the smaller firm stocks, resulting in higher country R^2. Reporting of firm-specific news on both large and small firms will still drive a higher country R^2 since movement of a single large firm will influence movements of other big stocks in the economy. Thus, as long as news has impact on prices, and as long as news coverage occurs on all stocks though perhaps with higher frequency on the bigger stocks, the subtle capitalization effects in our study via disaggregated measures of price synchronicity could explain the international disparity in stock price synchronicity. The capital inter-connectedness and relation to industry structures argument we provide of course does not necessarily replace the explanation via property rights. The proprietary right explanation in our study, however, remains robust when considering R^2 at the country level, and also disaggregated firm level. However, our study shows that this property right effect can be strongly supplemented with local market volatility effect as well as the industry structure effect.

There are interesting implications when we extend our considerations of such R^2 disparity issues to industry and market structures beyond the arguments of information dissemination channels and the information hypothesis. The size effect we document and similarly studied elsewhere in other contexts points to important recommendations for international portfolio management. Similarly, the industry effects we suggest should also be a key consideration of international portfolio management.

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Table 1: Summary Statistics of Key Variables

The table shows the statistics of mean and standard deviations (in parentheses) for the variables used in our study. The statistics are computed year-by-year for all 40 countries, for the periods 1995-2012.

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ERW	0.120	0.089	0.123	0.141	0.101	0.102	0.123	0.111	0.098	0.085	0.081	0.097	0.123	0.173	0.139	0.117	0.144	0.090
	(0.10)	(0.07)	(0.07)	(0.08)	(0.07)	(0.06)	(0.07)	(0.07)	(0.05)	(0.06)	(0.06)	(0.06)	(0.07)	(0.08)	(0.07)	(0.06)	(0.07)	(0.06)
EQW	0.125	0.100	0.129	0.138	0.100	0.098	0.123	0.116	0.109	0.099	0.092	0.107	0.135	0.164	0.134	0.135	0.163	0.101
	(0.09)	(0.06)	(0.07)	(0.07)	(0.06)	(0.06)	(0.07)	(0.06)	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.07)	(0.06)	(0.06)	(0.06)	(0.05)
GDP	9.075	9.123	9.101	9.024	9.031	9.037	9.013	9.078	9.228	9.373	9.469	9.560	9.706	9.793	9.707	9.805	9.903	9.895
	(1.29)	(1.26)	(1.25)	(1.32)	(1.33)	(1.29)	(1.29)	(1.30)	(1.32)	(1.31)	(1.28)	(1.24)	(1.22)	(1.19)	(1.16)	(1.10)	(1.08)	(1.06)
NSTK	5.592	5.660	5.711	5.767	5.790	5.836	5.815	5.786	5.797	5.790	5.790	5.777	5.788	5.819	5.796	5.826	5.845	5.871
	(0.92)	(0.97)	(0.90)	(0.90)	(0.93)	(0.97)	(0.99)	(1.08)	(1.12)	(1.13)	(1.21)	(1.26)	(1.27)	(1.27)	(1.28)	(1.32)	(1.37)	(1.39)
GEO	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728	12.728
	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)	(2.09)
VGDP	0.001	0.001	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
IHHI	0.169	0.165	0.159	0.158	0.153	0.151	0.156	0.145	0.143	0.143	0.144	0.150	0.162	0.167	0.160	0.158	0.157	0.164
	(0.10)	(0.09)	(0.09)	(0.07)	(0.08)	(0.08)	(0.09)	(0.07)	(0.07)	(0.07)	(0.07)	(0.08)	(0.10)	(0.11)	(0.12)	(0.12)	(0.12)	(0.12)
FHHI	0.049	0.053	0.047	0.046	0.043	0.043	0.042	0.039	0.040	0.050	0.051	0.057	0.058	0.062	0.054	0.055	0.058	0.060
	(0.04)	(0.05)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.06)	(0.05)	(0.06)	(0.06)	(0.07)	(0.05)	(0.06)	(0.06)	(0.06)
ECI	0.348	0.369	0.319	0.322	0.332	0.264	0.235	0.274	0.286	0.279	0.273	0.295	0.256	0.252	0.275	0.257	0.252	0.253
	(0.16)	(0.14)	(0.13)	(0.12)	(0.10)	(0.12)	(0.09)	(0.11)	(0.10)	(0.10)	(0.08)	(0.10)	(0.10)	(0.07)	(0.09)	(0.08)	(0.08)	(0.09)
GGI	13.363	13.544	13.321	13.005	13.705	13.089	13.485	13.546	12.984	12.990	13.274	13.143	12.633	12.948	12.843	12.934	13.001	13.197
	(4.01)	(3.98)	(4.34)	(4.18)	(3.82)	(4.29)	(3.94)	(4.00)	(4.29)	(4.51)	(4.41)	(4.38)	(4.70)	(4.29)	(4.36)	(4.42)	(4.50)	(4.12)
ACAP	22.323	22.463	22.137	22.191	22.355	22.256	22.036	22.068	22.179	22.351	22.429	22.670	22.936	22.287	22.521	22.616	22.632	22.841
	(1.92)	(1.89)	(1.90)	(2.04)	(2.03)	(1.98)	(1.93)	(1.81)	(1.89)	(1.85)	(1.78)	(1.85)	(1.61)	(1.69)	(1.41)	(1.82)	(1.58)	(1.45)
IVOL	1.426	1.155	1.840	2.495	1.828	1.901	1.823	1.804	1.422	1.134	1.086	1.254	1.526	2.680	1.832	1.349	1.753	1.100
	(0.81)	(0.52)	(0.79)	(0.94)	(0.61)	(0.73)	(0.63)	(0.60)	(0.44)	(0.38)	(0.40)	(0.42)	(0.42)	(0.53)	(0.38)	(0.32)	(0.38)	(0.39)

Table 2a: Trends in ERW R^2, EQW R^2 and GDP

The table shows the values of the ERW, EQW R^2's and GDP of the 40 countries in years 1995, 2000, 2005, and 2010. GDP is measured as the log of per capita GDP in US$.

	1995			2000			2005			2010		
	ERW	**EQW**	**GDP**	**ERW**	**EQW**	**GDP**	**ERW**	**EQW**	**GDP**	**ERW**	**EQW**	**GDP**
A) Developed Countries												
Australia	0.078	0.054	10.310	0.043	0.045	9.940	0.035	0.058	10.479	0.159	0.109	10.937
Austria	0.041	0.091	9.945	0.039	0.062	10.088	0.045	0.066	10.523	0.077	0.159	10.721
Belgium	0.071	0.108	10.244	0.069	0.078	10.034	0.031	0.072	10.496	0.062	0.153	10.683
Canada	0.042	0.044	9.932	0.041	0.038	10.091	0.040	0.039	10.495	0.038	0.042	10.767
Denmark	0.052	0.047	10.460	0.036	0.045	10.310	0.043	0.060	10.771	0.101	0.113	10.943
Finland	0.087	0.111	10.150	0.117	0.083	10.068	0.069	0.082	10.527	0.240	0.218	10.695
France	0.069	0.087	10.212	0.093	0.074	10.026	0.049	0.085	10.466	0.116	0.157	10.620
Germany	0.069	0.094	10.339	0.084	0.066	10.044	0.044	0.066	10.422	0.054	0.122	10.609
Greece	0.116	0.130	10.208	0.247	0.240	9.341	0.060	0.079	9.981	0.153	0.157	10.160
Holland	0.047	0.103	9.422	0.069	0.068	10.093	0.048	0.109	10.057	0.070	0.202	10.746
Hong Kong	0.109	0.119	10.058	0.093	0.099	10.15	0.047	0.068	10.187	0.124	0.144	10.387
Ireland	0.039	0.066	9.845	0.027	0.056	10.158	0.087	0.099	10.802	0.170	0.13	10.727
Italy	0.158	0.159	9.899	0.142	0.109	9.876	0.055	0.100	10.329	0.195	0.226	10.438
Japan	0.179	0.174	10.658	0.100	0.086	10.527	0.096	0.110	10.485	0.183	0.184	10.667
Korea	0.151	0.132	9.374	0.121	0.117	9.337	0.095	0.120	9.773	0.075	0.098	9.930
N. Zealand	0.039	0.039	10.436	0.041	0.038	9.509	0.049	0.057	10.223	0.059	0.081	10.398
Norway	0.055	0.054	6.396	0.054	0.045	10.531	0.040	0.042	11.094	0.072	0.071	11.364
Portugal	0.036	0.057	7.656	0.056	0.075	9.348	0.021	0.075	9.808	0.073	0.176	9.970
Singapore	0.072	0.114	10.074	0.102	0.103	10.034	0.046	0.057	10.258	0.056	0.125	10.708
Spain	0.123	0.151	9.626	0.091	0.069	9.579	0.085	0.126	10.170	0.239	0.226	10.316
Sweden	0.039	0.036	10.266	0.083	0.078	10.235	0.033	0.042	10.619	0.093	0.107	10.802
S. Africa	0.033	0.038	8.212	0.043	0.050	8.012	0.037	0.047	8.563	0.041	0.044	8.891
UK	0.061	0.073	9.912	0.069	0.058	10.131	0.059	0.083	10.55	0.115	0.134	10.503
US	0.018	0.02	10.234	0.022	0.027	10.47	0.021	0.033	10.66	0.037	0.049	10.754
B) Developing Countries												
Brazil	0.041	0.089	8.467	0.048	0.079	8.214	0.078	0.087	8.464	0.056	0.106	9.305
Chile	0.040	0.107	8.556	0.081	0.081	8.530	0.036	0.081	8.931	0.042	0.082	9.450
China	0.433	0.435	6.399	0.260	0.256	6.852	0.246	0.248	7.454	0.216	0.211	8.394
Columbia	0.165	0.075	7.987	0.210	0.074	7.816	0.171	0.107	8.137	0.186	0.126	8.742
Czech	0.078	0.090	8.629	0.059	0.056	8.652	0.154	0.076	9.451	0.120	0.120	9.849
India	0.143	0.160	5.970	0.098	0.086	6.142	0.162	0.213	6.589	0.215	0.218	7.213
Indonesia	0.082	0.098	6.945	0.112	0.129	6.685	0.109	0.119	7.163	0.083	0.104	8.002
Malaysia	0.242	0.233	8.365	0.196	0.199	8.292	0.097	0.098	8.598	0.063	0.087	9.063
Mexico	0.137	0.125	9.725	0.122	0.098	8.804	0.068	0.103	8.969	0.084	0.101	9.092
Pakistan	0.121	0.121	7.742	0.077	0.097	6.243	0.079	0.098	6.541	0.049	0.104	6.932
Peru	0.265	0.154	7.090	0.150	0.047	7.625	0.228	0.080	7.960	0.251	0.093	8.592
Philippines	0.188	0.128	8.190	0.099	0.101	6.950	0.189	0.116	7.091	0.131	0.108	7.667
Poland	0.329	0.319	9.360	0.098	0.089	8.402	0.065	0.081	8.983	0.137	0.159	9.418
Taiwan	0.341	0.342	9.462	0.165	0.299	9.592	0.108	0.108	9.682	0.175	0.196	9.825
Thailand	0.202	0.198	7.947	0.133	0.141	7.593	0.097	0.112	7.946	0.109	0.127	8.516
Turkey	0.193	0.231	8.284	0.269	0.275	8.013	0.100	0.181	8.341	0.160	0.225	8.891

Table 2b: Trends in NSTK, GEO, and VGDP

The table shows the values of log of number of listed stocks, log of geographical area in square kilometers, and variance of GDP of the 40 countries in years 1995, 2000, 2005, and 2010.

	1995			2000			2005			2010		
	NSTK	GEO	VGDP%	NSTK	GEO	VGDP%	NSTK	GEO	VGDP%	NSTK	GEO	VGDP%
A) Developed Country												
Australia	6.653	15.854	0.000	7.107	15.854	0.004	7.204	15.854	0.014	7.608	15.854	0.096
Austria	4.369	11.320	0.000	4.205	11.320	0.002	4.220	11.320	0.008	4.127	11.320	0.008
Belgium	4.727	10.326	0.000	4.970	10.326	0.010	5.288	10.326	0.019	4.920	10.326	0.053
Canada	6.899	16.023	0.001	7.332	16.023	0.022	7.607	16.023	0.019	7.977	16.023	0.057
Denmark	4.625	10.656	0.000	4.883	10.656	0.002	5.081	10.656	0.019	5.170	10.656	0.131
Finland	4.143	12.627	0.001	4.970	12.627	0.012	4.820	12.627	0.024	4.727	12.627	0.314
France	5.642	13.213	0.000	6.405	13.213	0.009	6.774	13.213	0.014	6.792	13.213	0.056
Germany	5.714	12.763	0.001	6.714	12.763	0.002	6.458	12.763	0.018	6.330	12.763	0.124
Greece	5.308	11.767	0.000	5.765	11.767	0.192	5.694	11.767	0.133	5.624	11.767	0.180
Holland	5.333	10.427	0.000	5.412	10.427	0.005	5.425	10.427	0.008	4.635	10.427	0.113
Hong Kong	6.016	6.957	0.000	6.426	6.957	0.030	6.781	6.957	0.041	7.030	6.957	0.059
Ireland	4.248	11.140	0.000	4.190	11.140	0.005	3.761	11.140	0.021	3.689	11.140	0.098
Italy	4.682	12.592	0.001	5.425	12.592	0.035	5.580	12.592	0.010	5.638	12.592	0.102
Japan	7.115	12.807	0.000	7.261	12.807	0.454	7.418	12.807	0.055	7.514	12.807	0.043
Korea	6.040	11.699	0.000	6.254	11.699	0.519	6.613	11.699	0.095	6.804	11.699	0.102
N. Zealand	4.820	12.481	0.001	4.883	12.481	0.021	4.970	12.481	0.009	4.898	12.481	0.047
Norway	4.949	12.808	0.000	5.198	12.808	0.022	5.198	12.808	0.015	5.220	12.808	0.036
Portugal	4.890	11.424	0.001	4.290	11.424	0.003	2.485	11.424	0.031	2.398	11.424	0.040
Singapore	5.170	6.507	0.000	5.945	6.507	0.190	6.475	6.507	0.180	6.052	6.507	0.197
Spain	5.886	13.121	0.000	5.784	13.121	0.011	6.105	13.121	0.008	6.184	13.121	0.107
Sweden	5.231	12.925	0.001	5.545	12.925	0.015	5.375	12.925	0.018	5.687	12.925	0.150
S. Africa	6.404	14.009	0.000	6.363	14.009	0.019	5.864	14.009	0.006	5.781	14.009	0.092
UK	7.417	12.396	0.001	7.687	12.396	0.001	7.558	12.396	0.006	7.197	12.396	0.103
US	7.695	16.030	0.000	8.036	16.030	0.008	8.101	16.030	0.015	8.287	16.030	0.066
B) Developing Country												
Brazil	6.240	15.939	0.002	6.061	15.939	0.037	5.878	15.939	0.039	5.855	15.939	0.061
Chile	5.429	13.519	0.001	5.308	13.519	0.189	5.242	13.519	0.020	5.142	13.519	0.068
China	5.572	16.055	0.002	6.933	16.055	0.020	7.191	16.055	0.007	7.602	16.055	0.044
Columbia	5.159	13.919	0.000	4.700	13.919	0.128	4.585	13.919	0.022	4.220	13.919	0.049
Czech	7.362	11.255	0.003	4.710	11.255	0.093	2.773	11.255	0.010	2.773	11.255	0.230
India	7.328	14.905	0.000	7.631	14.905	0.775	6.788	14.905	0.003	7.013	14.905	0.004
Indonesia	5.308	14.410	0.001	5.635	14.410	0.017	5.784	14.410	0.073	6.016	14.410	0.223
Malaysia	5.753	12.702	0.000	6.213	12.702	0.270	6.586	12.702	0.076	6.752	12.702	0.187
Mexico	5.165	14.480	0.000	5.130	14.480	0.004	4.949	14.480	0.025	4.787	14.480	0.091
Pakistan	5.394	13.555	0.000	6.138	13.555	0.028	6.205	13.555	0.041	6.240	13.555	0.056
Peru	5.313	14.062	0.004	5.187	14.062	0.156	5.106	14.062	0.040	5.159	14.062	0.124
Philippines	5.130	12.605	0.000	5.257	12.605	0.066	5.293	12.605	0.021	5.371	12.605	0.041
Poland	4.078	12.632	0.002	5.242	12.632	0.013	5.357	12.632	0.033	6.279	12.632	0.044
Taiwan	5.303	10.497	0.000	6.370	10.497	0.034	6.989	10.497	0.100	7.256	10.497	0.109
Thailand	6.033	13.144	0.000	6.246	13.144	0.601	6.418	13.144	0.036	6.590	13.144	0.100
Turkey	5.130	13.554	0.003	5.631	13.554	0.239	5.583	13.554	0.340	5.707	13.554	0.284

Table 2c: Trends in IHHI, FHHI, and ECI

The table shows the values of the Industry Herfindahl index (IHHI), the firm Herfindahl index (FHHI), and the earnings co-movement index of the 40 countries in years 1995, 2000, 2005, and 2010.

	1995			2000			2005			2010		
	IHHI	FHHI	ECI	IHHI	FHHI	ECI	IHHI	FHHI	ECI	IHHI	FHHI	ECI
A) Developed Countries												
Australia	0.168	0.036	0.263	0.160	0.031	0.181	0.159	0.028	0.250	0.159	0.029	0.215
Austria	0.136	0.045	0.261	0.097	0.034	0.121	0.103	0.030	0.257	0.118	0.031	0.261
Belgium	0.151	0.040	0.439	0.326	0.043	0.383	0.176	0.053	0.176	0.117	0.037	0.234
Canada	0.093	0.024	0.298	0.081	0.019	0.280	0.078	0.015	0.201	0.074	0.013	0.250
Denmark	0.116	0.030	0.050	0.109	0.031	0.671	0.258	0.080	0.141	0.307	0.085	0.400
Finland	0.228	0.025	0.511	0.382	0.033	0.179	0.326	0.029	0.189	0.342	0.033	0.252
France	0.078	0.009	0.216	0.085	0.011	0.158	0.073	0.010	0.327	0.075	0.010	0.146
Germany	0.090	0.017	0.141	0.079	0.016	0.240	0.072	0.013	0.264	0.063	0.012	0.262
Greece	0.147	0.070	0.360	0.130	0.073	0.362	0.238	0.214	0.269	0.158	0.134	0.227
Holland	0.298	0.081	0.296	0.195	0.026	0.161	0.125	0.021	0.312	0.165	0.021	0.353
Hong Kong	0.104	0.029	0.339	0.162	0.046	0.234	0.130	0.023	0.167	0.125	0.014	0.186
Ireland	0.108	0.026	0.424	0.115	0.021	0.127	0.125	0.019	0.401	0.116	0.018	0.311
Italy	0.053	0.007	0.495	0.051	0.007	0.311	0.051	0.006	0.375	0.048	0.005	0.350
Japan	0.100	0.039	0.442	0.070	0.029	0.208	0.066	0.023	0.275	0.063	0.020	0.327
Korea	0.100	0.022	0.556	0.087	0.016	0.238	0.067	0.025	0.334	0.062	0.025	0.296
N. Zealand	0.295	0.118	0.450	0.217	0.034	0.099	0.172	0.057	0.442	0.140	0.051	0.278
Norway	0.140	0.121	0.572	0.174	0.072	0.410	0.162	0.122	0.317	0.182	0.132	0.113
Portugal	0.372	0.048	0.095	0.266	0.042	0.192	0.222	0.043	0.375	0.240	0.044	0.453
Singapore	0.114	0.035	0.441	0.086	0.033	0.238	0.183	0.085	0.314	0.758	0.230	0.284
Spain	0.158	0.023	0.665	0.166	0.027	0.403	0.144	0.023	0.261	0.128	0.021	0.370
Sweden	0.152	0.026	0.129	0.133	0.024	0.293	0.105	0.017	0.266	0.098	0.016	0.369
S. Africa	0.104	0.081	0.241	0.101	0.037	0.280	0.189	0.038	0.208	0.241	0.030	0.173
UK	0.096	0.033	0.260	0.107	0.033	0.240	0.108	0.032	0.273	0.110	0.029	0.226
US	0.044	0.008	0.318	0.040	0.006	0.310	0.043	0.005	0.189	0.043	0.005	0.194
B) Developing Countries												
Brazil	0.125	0.073	0.292	0.103	0.047	0.101	0.135	0.043	0.264	0.237	0.034	0.268
Chile	0.108	0.047	0.309	0.101	0.031	0.217	0.090	0.029	0.275	0.098	0.027	0.278
China	0.326	0.131	0.494	0.162	0.078	0.158	0.111	0.041	0.347	0.107	0.032	0.225
Columbia	0.228	0.090	0.726	0.235	0.063	0.293	0.161	0.053	0.223	0.174	0.091	0.178
Czech	0.348	0.000	0.148	0.209	0.190	0.069	0.251	0.211	0.100	0.298	0.251	0.099
India	0.094	0.108	0.440	0.108	0.095	0.224	0.093	0.088	0.346	0.080	0.083	0.234
Indonesia	0.280	0.058	0.489	0.240	0.048	0.498	0.147	0.042	0.318	0.162	0.048	0.216
Malaysia	0.149	0.025	0.211	0.131	0.068	0.145	0.130	0.108	0.204	0.130	0.101	0.199
Mexico	0.190	0.040	0.510	0.190	0.043	0.255	0.192	0.053	0.212	0.130	0.037	0.214
Pakistan	0.228	0.119	0.582	0.116	0.045	0.176	0.122	0.030	0.324	0.152	0.034	0.190
Peru	0.194	0.079	0.390	0.120	0.039	0.306	0.097	0.020	0.320	0.095	0.021	0.358
Philippines	0.107	0.048	0.202	0.118	0.045	0.294	0.125	0.047	0.149	0.101	0.033	0.149
Poland	0.512	0.000	0.167	0.387	0.060	0.254	0.318	0.054	0.360	0.187	0.052	0.372
Taiwan	0.096	0.019	0.301	0.146	0.041	0.466	0.163	0.041	0.291	0.202	0.051	0.303
Thailand	0.168	0.020	0.195	0.113	0.057	0.366	0.079	0.059	0.341	0.084	0.071	0.215
Turkey	0.173	0.101	0.202	0.141	0.036	0.421	0.164	0.122	0.244	0.148	0.179	0.260

Table 2d: Trends in GGI, ACAP, and IVOL

The table shows the values of the good government index (GGI), the log of average US$ capitalization (ACAP) per firm, and market index weekly return volatility (IVOL) in % of the 40 countries in years 1995, 2000, 2005, and 2010.

	1995			2000			2005			2010		
	GGI	**ACAP**	**IVOL**	**GGI**	**ACAP**	**IVOL**	**GGI**	**ACAP**	**IVOL**	**GGI**	**ACAP**	**IVOL**
A) Developed Countries												
Australia	16.460	22.108	0.760	17.600	20.766	0.980	18.100	21.607	0.750	17.230	21.637	1.190
Austria	18.130	23.460	1.120	17.000	23.270	1.160	18.030	23.568	1.100	18.000	23.477	1.850
Belgium	16.180	23.762	0.750	15.430	23.355	1.410	15.400	23.378	0.650	16.430	23.360	1.440
Canada	18.200	21.880	0.650	18.530	22.350	2.140	17.730	21.391	0.810	18.230	21.161	0.940
Denmark	18.650	23.805	0.890	19.100	24.730	1.850	18.830	24.134	0.880	18.630	24.091	1.260
Finland	18.450	23.381	1.850	19.330	23.856	3.790	18.930	23.250	0.990	18.530	23.202	1.410
France	13.670	24.105	1.030	13.400	23.556	1.520	15.500	23.298	0.700	13.470	23.124	1.600
Germany	17.470	23.631	1.040	16.900	23.252	1.530	17.530	22.943	0.860	17.230	22.707	1.270
Greece	14.410	21.650	0.580	13.400	22.275	1.080	14.400	21.752	0.740	11.250	21.048	1.460
Holland	16.060	23.136	1.240	13.400	23.332	2.390	14.400	22.663	0.990	11.250	25.036	2.260
Hong Kong	16.450	24.657	1.470	17.030	25.344	2.230	17.630	24.849	0.790	17.730	24.756	1.210
Ireland	12.320	23.054	0.650	13.900	23.665	1.240	13.330	24.574	0.980	13.230	23.439	1.680
Italy	13.390	24.768	1.300	13.070	25.219	1.420	11.970	24.134	0.760	14.470	23.214	1.690
Japan	14.610	23.599	1.710	11.470	22.980	1.660	13.100	22.700	0.960	11.070	22.250	1.310
Korea	14.950	22.456	1.520	14.330	21.548	2.340	15.170	22.354	1.210	16.170	23.637	1.400
N. Zealand	18.880	22.520	0.680	18.730	21.336	1.330	19.600	20.497	0.800	18.630	26.909	1.440
Norway	17.940	21.736	0.840	18.430	19.917	1.280	18.230	19.644	1.990	17.930	19.052	1.280
Portugal	12.240	21.809	0.650	10.800	22.313	1.530	12.070	24.776	0.640	11.970	25.640	1.670
Singapore	14.890	23.752	0.740	15.730	22.477	1.960	15.830	22.285	0.770	15.330	22.403	0.950
Spain	10.960	24.336	0.960	10.670	24.961	1.510	11.670	24.448	0.700	12.070	24.566	2.100
Sweden	17.740	24.523	1.220	18.800	24.178	2.100	18.400	23.916	1.310	18.400	23.731	1.030
S. Africa	8.290	20.884	1.010	8.190	20.703	1.460	12.400	21.101	1.480	8.310	22.064	1.090
UK	17.900	22.663	0.590	18.000	22.985	1.200	17.300	23.250	0.630	16.930	23.011	1.270
US	17.120	23.547	0.550	17.100	23.492	1.460	18.270	23.269	0.650	16.430	22.983	1.250
B) Developing Countries												
Brazil	10.720	22.889	3.400	12.640	22.836	2.430	12.320	23.813	1.720	12.320	24.235	1.430
Chile	17.270	21.946	1.710	13.730	22.095	1.520	16.970	22.738	0.800	16.530	22.993	0.840
China	3.490	22.213	3.590	4.430	22.607	1.640	3.200	22.041	1.480	4.830	23.333	1.560
Columbia	7.440	15.428	0.910	4.530	15.151	1.100	8.000	15.592	1.370	4.830	17.593	1.120
Czech	12.070	18.825	1.330	10.970	21.602	1.890	9.300	23.859	1.370	11.270	23.590	1.420
India	5.940	18.977	1.250	5.700	19.488	2.450	6.200	21.539	1.430	6.800	20.648	1.270
Indonesia	12.570	22.279	1.340	8.530	21.014	1.790	5.370	21.918	1.400	9.330	22.373	1.370
Malaysia	9.850	22.831	1.410	7.300	21.545	1.780	8.170	20.986	0.610	7.100	20.541	0.600
Mexico	10.240	22.112	2.510	8.600	21.916	2.900	8.400	22.768	1.160	8.530	22.998	1.040
Pakistan	8.920	19.244	1.730	10.530	17.503	2.420	10.430	19.023	2.360	10.630	18.779	1.030
Peru	8.500	21.180	3.060	7.730	21.341	1.210	8.170	23.541	1.340	4.830	21.483	1.660
Philippines	9.510	22.701	1.700	10.080	23.156	1.860	7.190	22.654	1.320	6.770	22.455	1.350
Poland	6.770	23.315	2.730	9.470	22.913	2.020	7.170	22.696	1.050	6.400	21.275	1.210
Taiwan	13.700	23.702	1.860	13.670	23.396	3.080	13.670	22.026	0.920	12.770	22.742	1.200
Thailand	11.380	22.672	1.360	16.070	20.523	3.020	12.530	20.138	1.230	13.200	20.956	1.070
Turkey	10.770	18.522	3.360	7.800	22.307	4.370	9.200	23.195	1.740	8.400	22.992	1.730

Table 3a: Regressions of stock price synchronicity on economy variables **across 40 countries** in each of years 1995 through 2012. Regressions follow that in MYY (2000)'s Table 4. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. In addition the good government index (GGI) for each country is used in the cross-sectional regression to explain the stock price synchronicity variable $\Upsilon_{j,y} = \log R^2_{j,y}/(1 - R^2_{j,y})$ where $R^2_{j,y}$ is error-weighted, i.e. **LERW**. Regression follows Eq. (7) in paper. Numbers within parentheses indicate the associated p-values.

Year	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Intercept	2.782	0.043	0.909	-0.210	-1.681	-1.763	-0.161	-0.067	-1.625	-1.303	-0.984	-0.949	-1.825	0.733	-1.215	-0.740	0.871	-1.314
	(0.15)	(0.97)	(0.59)	(0.89)	(0.19)	(0.20)	(0.87)	(0.95)	(0.18)	(0.29)	(0.43)	(0.52)	(0.22)	(0.58)	(0.35)	(0.64)	(0.52)	(0.33)
GDP	-0.222	-0.044	-0.100	0.079	0.068	0.065	0.048	0.016	0.090	-0.084	-0.018	-0.010	0.142	-0.038	0.147	0.018	-0.180	0.005
	(0.16)	(0.68)	(0.36)	(0.42)	(0.40)	(0.53)	(0.53)	(0.84)	(0.32)	(0.36)	(0.83)	(0.92)	(0.21)	(0.67)	(0.11)	(0.88)	(0.09)	(0.96)
NSTK	-0.162	0.043	0.101	-0.070	0.026	0.047	0.029	0.007	-0.010	0.129	0.053	-0.051	-0.030	-0.021	-0.015	-0.024	-0.011	0.052
	(0.30)	(0.72)	(0.45)	(0.56)	(0.81)	(0.68)	(0.76)	(0.93)	(0.91)	(0.16)	(0.49)	(0.56)	(0.72)	(0.76)	(0.84)	(0.77)	(0.87)	(0.44)
GEO	-0.070	-0.075	-0.143	-0.113	-0.082	-0.066	-0.090	-0.080	-0.046	-0.036	-0.014	0.027	-0.011	-0.064	-0.050	-0.081	-0.060	-0.034
	(0.31)	(0.14)	(0.01)	(0.03)	(0.05)	(0.18)	(0.03)	(0.06)	(0.30)	(0.45)	(0.74)	(0.60)	(0.85)	(0.18)	(0.30)	(0.17)	(0.23)	(0.50)
VGDP	267.7	139.1	253.6	445.6	28.5	103.9	90.5	96.3	74.0	130.7	-34.9	211.1	190.4	-8.3	-242.1	197.9	238.4	161.1
	(0.08)	(0.30)	(0.15)	(0.01)	(0.55)	(0.09)	(0.10)	(0.11)	(0.26)	(0.43)	(0.82)	(0.24)	(0.80)	(0.99)	(0.48)	(0.24)	(0.08)	(0.20)
IHHI	-1.643	-1.015	1.644	0.699	1.336	1.431	-1.267	-2.522	-1.779	1.393	-0.996	-1.200	-1.139	-2.220	-0.465	-2.171	-1.951	-1.423
	(0.30)	(0.44)	(0.22)	(0.63)	(0.24)	(0.30)	(0.25)	(0.08)	(0.27)	(0.47)	(0.52)	(0.51)	(0.44)	(0.05)	(0.65)	(0.09)	(0.08)	(0.21)
FHHI	-10.075	-2.771	-6.941	-3.315	-0.482	-0.291	-0.069	-3.242	2.423	-0.696	2.051	0.438	2.372	2.915	1.765	1.432	0.878	0.826
	(0.04)	(0.40)	(0.08)	(0.38)	(0.88)	(0.94)	(0.98)	(0.35)	(0.48)	(0.75)	(0.35)	(0.85)	(0.42)	(0.12)	(0.45)	(0.60)	(0.71)	(0.67)
ECI	0.810	0.710	0.573	0.886	2.566	1.172	1.354	2.099	1.410	0.022	-0.281	-0.614	-0.344	-0.130	-0.508	1.542	1.318	0.433
	(0.35)	(0.33)	(0.48)	(0.37)	(0.01)	(0.14)	(0.17)	(0.03)	(0.17)	(0.98)	(0.80)	(0.54)	(0.77)	(0.92)	(0.65)	(0.29)	(0.32)	(0.69)
GGI	-0.073	-0.110	-0.086	-0.084	-0.108	-0.094	-0.120	-0.111	-0.096	-0.076	-0.111	-0.088	-0.100	-0.067	-0.097	-0.059	-0.040	-0.089
	(0.09)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.04)	(0.11)	(0.00)
F-Statistic	2.408	3.375	3.145	3.886	6.983	3.053	6.137	5.481	3.100	2.893	5.653	3.281	2.328	2.613	2.596	1.479	2.623	2.719
Sample Size	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
R^2	0.383	0.466	0.448	0.501	0.643	0.441	0.613	0.586	0.444	0.427	0.593	0.458	0.375	0.403	0.401	0.276	0.404	0.412
Adj R^2	0.224	0.328	0.306	0.372	0.551	0.296	0.513	0.479	0.301	0.280	0.488	0.319	0.214	0.249	0.247	0.090	0.250	0.261

Table 3b: Regressions of stock price synchronicity on economy variables **across 40 countries** in each of years 1995 through 2012. Regressions follow that in MYY (2000)'s Table 4. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. In addition the good government index (GGI) for each country is used in the cross-sectional regression to explain the stock price synchronicity variable $\Upsilon_{j,y} = \log R^2_{j,y}/(1-R^2_{j,y})$ where $R^2_{j,y}$ is equal-weighted, i.e. **LEQW**. Regression follows Eq. (7) in paper. Numbers within parentheses indicate the associated p-values.

Year	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Intercept	0.622	-0.192	0.631	-1.045	-1.674	-1.567	-0.106	-0.257	-1.940	-1.092	-1.927	-2.014	-1.302	-0.317	-1.572	-1.276	0.504	-0.400
	(0.70)	(0.88)	(0.67)	(0.41)	(0.17)	(0.20)	(0.92)	(0.80)	(0.06)	(0.23)	(0.03)	(0.09)	(0.27)	(0.79)	(0.15)	(0.28)	(0.66)	(0.74)
GDP	0.004	-0.003	-0.059	0.081	0.066	0.041	0.062	0.006	0.125	-0.033	0.042	0.076	0.144	0.024	0.104	0.032	-0.098	-0.024
	(0.97)	(0.98)	(0.54)	(0.30)	(0.39)	(0.66)	(0.43)	(0.94)	(0.11)	(0.62)	(0.48)	(0.34)	(0.11)	(0.77)	(0.17)	(0.72)	(0.28)	(0.81)
NSTK	-0.063	0.095	0.130	0.096	0.139	0.097	0.050	0.102	0.060	0.117	0.041	0.012	0.013	0.069	0.095	0.025	0.012	0.010
	(0.63)	(0.42)	(0.27)	(0.32)	(0.17)	(0.34)	(0.60)	(0.24)	(0.42)	(0.09)	(0.45)	(0.86)	(0.84)	(0.27)	(0.12)	(0.67)	(0.84)	(0.87)
GEO	-0.081	-0.107	-0.159	-0.127	-0.119	-0.104	-0.123	-0.113	-0.076	-0.070	-0.022	0.001	-0.077	-0.096	-0.069	-0.096	-0.096	-0.088
	(0.17)	(0.03)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)	(0.01)	(0.05)	(0.05)	(0.47)	(0.99)	(0.09)	(0.03)	(0.09)	(0.03)	(0.03)	(0.06)
VGDP	113.8	37.0	142.2	399.6	23.8	79.5	84.1	103.7	82.2	123.5	96.0	176.2	-43.7	161.9	-199.4	150.3	237.6	105.0
	(0.37)	(0.78)	(0.36)	(0.00)	(0.60)	(0.14)	(0.14)	(0.09)	(0.14)	(0.31)	(0.37)	(0.22)	(0.94)	(0.83)	(0.49)	(0.23)	(0.04)	(0.35)
IHHI	-0.043	1.076	2.255	2.104	1.624	1.049	-1.107	-1.048	-0.546	0.363	-0.566	0.075	-0.843	-1.742	0.155	-1.345	-1.427	-1.105
	(0.97)	(0.40)	(0.06)	(0.08)	(0.13)	(0.40)	(0.33)	(0.46)	(0.69)	(0.79)	(0.60)	(0.96)	(0.46)	(0.08)	(0.86)	(0.15)	(0.13)	(0.28)
FHHI	-3.710	-3.457	-6.020	-5.276	-1.011	0.454	-1.449	-4.131	-0.154	-0.057	0.199	-1.393	1.269	2.173	0.339	1.254	-0.390	-0.300
	(0.35)	(0.28)	(0.08)	(0.09)	(0.73)	(0.89)	(0.66)	(0.24)	(0.96)	(0.97)	(0.90)	(0.44)	(0.58)	(0.19)	(0.86)	(0.54)	(0.84)	(0.86)
ECI	0.619	-0.054	0.008	0.095	1.692	0.796	1.426	0.930	0.897	0.264	1.155	-0.035	-0.114	0.538	-0.364	2.043	0.848	0.665
	(0.40)	(0.94)	(0.99)	(0.90)	(0.05)	(0.26)	(0.16)	(0.31)	(0.30)	(0.71)	(0.15)	(0.97)	(0.90)	(0.62)	(0.70)	(0.07)	(0.45)	(0.50)
GGI	-0.116	-0.097	-0.077	-0.070	-0.100	-0.072	-0.110	-0.087	-0.080	-0.068	-0.083	-0.076	-0.083	-0.063	-0.075	-0.035	-0.027	-0.051
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.11)	(0.20)	(0.04)
F-Statistic	2.731	2.401	3.306	4.764	5.850	2.609	5.292	4.098	3.129	3.963	5.788	2.362	2.265	2.509	2.381	1.857	2.085	1.533
Sample Size	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
R^2	0.413	0.383	0.460	0.551	0.602	0.402	0.577	0.514	0.447	0.506	0.599	0.379	0.369	0.393	0.381	0.324	0.350	0.283
Adj R^2	0.262	0.223	0.321	0.436	0.499	0.248	0.468	0.389	0.304	0.378	0.495	0.218	0.206	0.236	0.221	0.150	0.182	0.098

Table 3c: Regressions of stock price synchronicity on economy variables **across 40 countries** in each of years 1995 through 2012. In addition to control, structural, and GGI variables, additional country-level variable of market index volatility IVOL is included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. Dependent stock price synchronicity variable is $\Upsilon_{j,y} = \log\ R_{j,y}^2/(1 - R_{j,y}^2)$ where $R_{j,y}^2$ is error-weighted, i.e. **LERW**. Regression follows Eq. (8) in paper. Numbers within parentheses indicate the associated p-values.

Year	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Intercept	1.440	-0.227	0.259	-0.304	-1.991	-2.024	-0.867	-0.440	-1.821	-3.224	-1.414	-2.999	-3.927	-0.670	-2.593	-1.989	-2.891	-1.813
	(0.41)	(0.86)	(0.89)	(0.87)	(0.13)	(0.12)	(0.37)	(0.67)	(0.15)	(0.01)	(0.32)	(0.04)	(0.02)	(0.69)	(0.06)	(0.25)	(0.07)	(0.22)
GDP	-0.280	-0.091	-0.093	0.081	0.075	0.050	0.046	0.026	0.074	0.034	0.018	0.092	0.240	0.039	0.134	0.014	-0.027	0.004
	(0.05)	(0.39)	(0.40)	(0.42)	(0.36)	(0.60)	(0.52)	(0.74)	(0.42)	(0.70)	(0.85)	(0.32)	(0.04)	(0.71)	(0.12)	(0.90)	(0.78)	(0.97)
NSTK	-0.031	0.133	0.099	-0.067	0.026	0.041	0.049	0.015	-0.016	0.176	0.070	0.067	-0.006	-0.007	0.004	0.046	0.088	0.078
	(0.83)	(0.29)	(0.46)	(0.59)	(0.80)	(0.70)	(0.57)	(0.86)	(0.86)	(0.03)	(0.39)	(0.42)	(0.94)	(0.92)	(0.96)	(0.61)	(0.17)	(0.29)
GEO	-0.112	-0.106	-0.131	-0.112	-0.074	-0.064	-0.072	-0.075	-0.032	-0.051	-0.025	-0.020	-0.006	-0.058	-0.023	-0.070	-0.025	-0.024
	(0.08)	(0.04)	(0.02)	(0.03)	(0.08)	(0.16)	(0.06)	(0.07)	(0.50)	(0.22)	(0.58)	(0.67)	(0.91)	(0.22)	(0.61)	(0.23)	(0.56)	(0.64)
VGDP	-50.6	123.9	192.1	435.1	11.2	40.1	43.2	79.6	55.3	-134.8	-70.3	-30.9	-47.9	-128.3	-487.6	183.9	89.3	152.9
	(0.76)	(0.34)	(0.30)	(0.02)	(0.82)	(0.51)	(0.42)	(0.18)	(0.43)	(0.41)	(0.66)	(0.86)	(0.95)	(0.88)	(0.15)	(0.26)	(0.45)	(0.22)
IHHI	-0.622	-0.686	1.635	0.709	0.999	0.268	-1.560	-2.789	-1.961	1.447	-0.954	-0.630	-0.744	-1.825	-0.462	-1.677	-1.132	-1.402
	(0.66)	(0.59)	(0.22)	(0.63)	(0.40)	(0.84)	(0.13)	(0.05)	(0.23)	(0.38)	(0.54)	(0.69)	(0.59)	(0.11)	(0.63)	(0.18)	(0.24)	(0.22)
FHHI	-11.546	-4.357	-5.867	-3.213	-0.218	1.605	1.044	-1.766	3.007	-0.826	1.910	0.354	2.196	2.864	3.301	1.874	3.737	1.477
	(0.01)	(0.18)	(0.15)	(0.42)	(0.94)	(0.65)	(0.73)	(0.61)	(0.39)	(0.66)	(0.39)	(0.86)	(0.43)	(0.12)	(0.15)	(0.48)	(0.09)	(0.48)
ECI	0.899	0.279	0.543	0.881	2.310	0.721	0.174	1.579	0.968	0.186	-0.251	-0.736	-0.776	-0.553	-0.410	0.913	0.524	0.060
	(0.24)	(0.70)	(0.50)	(0.38)	(0.02)	(0.34)	(0.86)	(0.10)	(0.40)	(0.83)	(0.82)	(0.40)	(0.49)	(0.66)	(0.69)	(0.53)	(0.64)	(0.96)
GGI	-0.010	-0.088	-0.074	-0.083	-0.109	-0.091	-0.117	-0.120	-0.092	-0.091	-0.116	-0.091	-0.092	-0.078	-0.096	-0.059	-0.071	-0.088
	(0.81)	(0.01)	(0.02)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.04)	(0.00)	(0.00)
IVOL	0.671	0.415	0.150	0.014	0.165	0.333	0.355	0.243	0.206	0.885	0.188	0.862	0.621	0.261	0.555	0.600	0.975	0.259
	(0.00)	(0.06)	(0.30)	(0.92)	(0.28)	(0.02)	(0.02)	(0.12)	(0.39)	(0.00)	(0.49)	(0.00)	(0.03)	(0.19)	(0.02)	(0.12)	(0.00)	(0.36)
F-Statistic	3.935	3.682	2.927	3.346	6.387	3.822	7.160	5.397	2.821	4.688	4.995	5.022	2.923	2.585	3.382	1.669	4.802	2.504
Sample Size	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
R^2	0.541	0.525	0.468	0.501	0.657	0.534	0.682	0.618	0.458	0.584	0.600	0.601	0.467	0.437	0.504	0.334	0.590	0.429
Adj R^2	0.404	0.382	0.308	0.351	0.554	0.394	0.587	0.504	0.296	0.460	0.480	0.481	0.307	0.268	0.355	0.134	0.467	0.258

Table 3d: Regressions of stock price synchronicity on economy variables **across 40 countries** in each of years 1995 through 2012. In addition to control, structural, and GGI variables, additional country-level variable of market index volatility IVOL is included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. Dependent stock price synchronicity variable is $\Upsilon_{j,y} = \log R^2_{j,y}/(1 - R^2_{j,y})$ where $R^2_{j,y}$ is equal-weighted, i.e. **LEQW**. Regression follows Eq. (8) in paper. Numbers within parentheses indicate the associated p-values.

Year	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Intercept	-0.655	-0.339	-0.018	-1.465	-2.213	-1.853	-0.763	-0.694	-2.257	-1.890	-1.991	-2.852	-1.680	-0.369	-2.385	-2.514	-2.322	-1.401
	(0.64)	(0.80)	(0.99)	(0.32)	(0.06)	(0.09)	(0.45)	(0.49)	(0.03)	(0.06)	(0.05)	(0.03)	(0.24)	(0.81)	(0.05)	(0.05)	(0.10)	(0.26)
GDP	-0.052	-0.028	-0.052	0.090	0.078	0.025	0.060	0.017	0.099	0.016	0.047	0.118	0.161	0.026	0.097	0.028	0.017	-0.027
	(0.64)	(0.79)	(0.59)	(0.27)	(0.28)	(0.75)	(0.42)	(0.82)	(0.19)	(0.82)	(0.50)	(0.16)	(0.10)	(0.79)	(0.20)	(0.74)	(0.85)	(0.78)
NSTK	0.062	0.144	0.128	0.109	0.140	0.091	0.069	0.111	0.050	0.136	0.044	0.061	0.017	0.069	0.106	0.094	0.087	0.061
	(0.59)	(0.26)	(0.27)	(0.28)	(0.14)	(0.32)	(0.45)	(0.19)	(0.49)	(0.04)	(0.45)	(0.43)	(0.79)	(0.28)	(0.08)	(0.15)	(0.14)	(0.33)
GEO	-0.121	-0.123	-0.147	-0.123	-0.105	-0.101	-0.106	-0.106	-0.053	-0.076	-0.023	-0.019	-0.076	-0.096	-0.054	-0.085	-0.069	-0.068
	(0.02)	(0.02)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.17)	(0.03)	(0.47)	(0.66)	(0.10)	(0.03)	(0.19)	(0.05)	(0.08)	(0.13)
VGDP	-189.0	28.80	80.80	352.3	-6.500	9.300	40.20	84.10	51.90	13.30	90.70	77.30	-86.60	157.5	-344.3	136.3	125.6	88.60
	(0.16)	(0.83)	(0.62)	(0.02)	(0.88)	(0.86)	(0.47)	(0.16)	(0.36)	(0.92)	(0.43)	(0.62)	(0.89)	(0.84)	(0.25)	(0.25)	(0.24)	(0.41)
IHHI	0.928	1.254	2.247	2.151	1.036	-0.232	-1.379	-1.361	-0.841	0.386	-0.560	0.308	-0.772	-1.728	0.157	-0.855	-0.811	-1.063
	(0.42)	(0.34)	(0.06)	(0.08)	(0.32)	(0.84)	(0.20)	(0.32)	(0.53)	(0.77)	(0.61)	(0.83)	(0.51)	(0.10)	(0.85)	(0.35)	(0.34)	(0.27)
FHHI	-5.110	-4.316	-4.947	-4.820	-0.551	2.540	-0.415	-2.399	0.794	-0.111	0.178	-1.428	1.237	2.171	1.245	1.692	1.758	1.005
	(0.13)	(0.19)	(0.16)	(0.14)	(0.84)	(0.40)	(0.89)	(0.49)	(0.78)	(0.94)	(0.91)	(0.42)	(0.60)	(0.19)	(0.53)	(0.38)	(0.36)	(0.57)
ECI	0.704	-0.287	-0.022	0.074	1.246	0.300	0.328	0.320	0.180	0.332	1.160	-0.085	-0.192	0.523	-0.306	1.419	0.251	-0.083
	(0.26)	(0.70)	(0.97)	(0.93)	(0.14)	(0.64)	(0.76)	(0.73)	(0.85)	(0.63)	(0.15)	(0.91)	(0.84)	(0.65)	(0.74)	(0.19)	(0.80)	(0.93)
GGI	-0.056	-0.085	-0.065	-0.066	-0.102	-0.068	-0.106	-0.097	-0.074	-0.075	-0.084	-0.078	-0.082	-0.063	-0.074	-0.035	-0.050	-0.049
	(0.11)	(0.01)	(0.02)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.09)	(0.02)	(0.04)
IVOL	0.639	0.225	0.150	0.064	0.288	0.366	0.330	0.285	0.335	0.367	0.028	0.352	0.112	0.010	0.327	0.595	0.733	0.519
	(0.00)	(0.31)	(0.24)	(0.57)	(0.04)	(0.00)	(0.03)	(0.07)	(0.09)	(0.09)	(0.88)	(0.15)	(0.63)	(0.96)	(0.11)	(0.04)	(0.00)	(0.04)
F-Statistic	5.052	2.256	3.139	4.181	6.335	4.099	5.932	4.336	3.314	4.064	4.985	2.426	1.989	2.159	2.544	2.391	3.426	2.066
Sample Size	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
R^2	0.602	0.404	0.485	0.556	0.655	0.551	0.640	0.565	0.499	0.549	0.599	0.421	0.374	0.393	0.433	0.418	0.507	0.383
Adj R^2	0.483	0.225	0.330	0.423	0.552	0.417	0.532	0.435	0.348	0.414	0.479	0.248	0.186	0.211	0.263	0.243	0.359	0.197

Table 4: Regressions of decile stock price synchronicity on economy variables **across 40 countries** in each of years 1995 through 2012. Dependent stock price synchronicity variable is $\Upsilon_{d,j,y} = \log R^2_{d,j,y}/(1 - R^2_{d,j,y})$ where $R^2_{d,j,y}$ is equal-weighted across stocks in each decile. Regression follows Eq. (8) in paper. In addition to control, structural, GGI and IVOL variables, additional country-decile size variables of log average decile capitalization per firm, ACAP, are included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. Numbers within parentheses indicate the associated p-values. Note that the cross-sectional sample size is 400 as there are 10 deciles in each of 40 countries. The F-statistics are all significant at p-values of less than 0.0001.

Year	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Intercept	-1.780	-2.382	-3.304	-3.789	-4.556	-3.259	-2.877	-3.172	-3.784	-5.306	-4.602	-2.625	-4.169	-2.485	-4.574	-3.879	-4.093	-4.308
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GDP	-0.064	-0.065	-0.122	0.013	-0.034	-0.075	-0.081	-0.215	-0.042	-0.102	-0.086	-0.044	0.052	-0.091	0.038	-0.079	-0.121	-0.093
	(0.01)	(0.00)	(0.00)	(0.39)	(0.03)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)	(0.02)	(0.00)	(0.12)	(0.00)	(0.00)	(0.00)
NSTK	0.020	0.117	0.208	0.142	0.125	0.144	0.151	0.194	0.117	0.185	0.130	0.125	0.132	0.163	0.150	0.146	0.197	0.172
	(0.41)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GEO	-0.099	-0.108	-0.123	-0.108	-0.069	-0.104	-0.107	-0.082	-0.093	-0.039	-0.005	-0.129	-0.096	-0.109	-0.054	-0.079	-0.092	-0.091
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.44)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
VGDP	-88.13	52.87	203.81	511.44	38.14	22.95	63.27	137.82	73.50	42.43	113.12	174.17	57.78	533.15	-313.01	37.80	69.35	62.96
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.05)	(0.00)	(0.00)	(0.00)	(0.04)	(0.00)	(0.00)	(0.66)	(0.00)	(0.00)	(0.27)	(0.02)	(0.00)
IHHI	0.173	0.086	2.287	1.897	1.684	0.011	-1.029	-0.843	-0.850	1.445	0.411	-0.444	-0.429	-1.611	0.029	-0.421	-0.438	-0.977
	(0.48)	(0.66)	(0.00)	(0.00)	(0.00)	(0.97)	(0.00)	(0.00)	(0.00)	(0.00)	(0.05)	(0.12)	(0.08)	(0.00)	(0.91)	(0.08)	(0.04)	(0.00)
FHHI	-2.533	-3.353	-4.073	-5.404	-0.620	0.174	-2.550	-6.273	-1.292	-0.094	-0.085	-3.563	-0.033	1.461	1.033	0.902	1.285	1.311
	(0.00)	(0.00)	(0.00)	(0.00)	(0.27)	(0.79)	(0.00)	(0.00)	(0.01)	(0.71)	(0.79)	(0.00)	(0.95)	(0.00)	(0.10)	(0.12)	(0.01)	(0.00)
ECI	0.496	-0.402	0.476	0.325	1.258	0.417	-0.121	1.062	1.255	1.197	1.676	-0.316	0.585	-0.039	-0.104	0.954	1.981	0.090
	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)	(0.01)	(0.58)	(0.00)	(0.00)	(0.00)	(0.00)	(0.06)	(0.01)	(0.86)	(0.74)	(0.00)	(0.00)	(0.58)
GGI	-0.073	-0.059	-0.039	-0.063	-0.066	-0.051	-0.064	-0.054	-0.063	-0.045	-0.054	-0.046	-0.070	-0.039	-0.064	-0.013	-0.034	-0.040
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)	(0.00)
IVOL	0.524	0.716	0.389	0.113	0.322	0.372	0.444	0.380	0.350	0.400	-0.010	0.325	0.121	-0.043	0.360	0.671	0.618	0.537
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.77)	(0.00)	(0.02)	(0.21)	(0.00)	(0.00)	(0.00)	(0.00)
ACAP	0.077	0.077	0.106	0.123	0.113	0.093	0.114	0.143	0.126	0.143	0.119	0.104	0.131	0.139	0.108	0.088	0.112	0.140
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Sample Size	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
R^2	0.530	0.532	0.503	0.574	0.562	0.443	0.540	0.573	0.528	0.592	0.531	0.431	0.418	0.455	0.321	0.305	0.402	0.507
Adj R^2	0.517	0.520	0.490	0.563	0.550	0.429	0.529	0.562	0.516	0.582	0.519	0.416	0.403	0.441	0.303	0.287	0.387	0.495

Table 5: Panel regressions of stock price synchronicity on economy variables, and different panels are used, which include country-panel, decile-country panel and sector-country panel. Dependent stock price synchronicity variable is $\Upsilon_{d,j,y} = \log R^2_{d,j,y}/(1 - R^2_{d,j,y})$ where $R^2_{d,j,y}$ is equal-weighted across stocks in each decile. Regression follows Eq. (9) and Eq. (10) in the paper. In addition to control, structural, GGI, IVOL, and LSCI variables, additional country-decile size variables of log average decile capitalization per firm, ACAP are included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. Numbers within parentheses indicate the t-statistics. Note that there are 40 countries (denoted by subscript j), 10 deciles (denoted by a subscript d), and 30 industry sectors (denoted by a subscript s), and 18 years (1995 to 2012) (denoted by a subscript y) that are used in creating the panels.

	Country Panel		**Decile-Country Panel**				**Sector-Country Panel**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable	LERW	LEQR	LERW	LEQR	LERW	LEQR	LERW	LEQR
ACAP	-0.000	0.004	**0.005*****	**0.007*****	**0.004*****	**0.006*****	**0.006*****	**0.005*****
	(-0.09)	(0.78)	**(10.41)**	**(10.60)**	**(7.29)**	**(7.39)**	**(4.38)**	**(4.08)**
GGI	**-0.033*****	**-0.027*****	0.007	0.008	0.008	0.009	0.025**	0.031***
	(-4.41)	**(-3.81)**	(0.84)	(0.76)	(0.91)	(0.85)	(2.29)	(2.86)
IVOL	0.141***	0.097**	0.029	0.054	0.030	0.054	0.033	0.037
	(3.19)	(2.32)	(1.06)	(1.60)	(1.07)	(1.59)	(0.99)	(1.09)
LGDP	0.022	0.016	-0.065	-0.070	-0.075	-0.084	-0.099	-0.070
	(0.89)	(0.68)	(-1.03)	(-0.91)	(-1.19)	(-1.10)	(-1.35)	(-0.93)
LNSTOCK	-0.022	-0.021	0.152***	0.184***	0.136***	0.159***	0.099***	0.096***
	(-0.83)	(-0.81)	(7.07)	(6.89)	(6.35)	(5.95)	(9.45)	(8.56)
Lgeo	-0.003	-0.013	0.188***	0.217***	0.197***	0.231***	-4.525***	-4.392***
	(-0.27)	(-1.24)	(3.68)	(3.68)	(3.87)	(3.91)	(-11.13)	(-10.58)
Vgdpg	4.317	10.563	17.758	12.849	16.945	11.464	11.801	5.104
	(0.19)	(0.47)	(1.13)	(0.64)	(1.08)	(0.57)	(0.72)	(0.30)
ECI	0.839***	0.871***	0.085	0.071	0.079	0.062	0.154	0.059
	(3.24)	(3.43)	(0.54)	(0.37)	(0.51)	(0.33)	(0.86)	(0.31)
IHHI	0.218	0.094	-0.330	-0.305	-0.549	-0.626	-0.046	-0.034
	(0.49)	(0.21)	(-0.70)	(-0.52)	(-1.15)	(-1.04)	(-0.24)	(-0.19)
FHHI	0.598	0.863	0.258	0.207	0.095	-0.029	-0.623	-0.624
	(0.92)	(1.29)	(0.39)	(0.25)	(0.14)	(-0.03)	(-1.35)	(-1.35)
_cons	-2.941***	-2.727***	-5.290***	-7.231***	-6.282***	-8.452***	68.730***	66.127***
	(-8.58)	(-8.47)	(-13.88)	(-16.22)	(-13.08)	(-15.06)	(10.79)	(10.23)
N	720	720	7200	7200	7200	7200	15218	15218
R-sq	0.186	0.193	0.500	0.466	0.506	0.477	0.423	0.371
adj. R-sq	0.154	0.162	0.495	0.461	0.501	0.471	0.420	0.367
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	NO	NO	YES	YES	YES	YES	YES	YES
Industry Fixed Effect	NO	NO	YES	YES	YES	YES	YES	YES
Decile Fixed Effect	NO	NO	NO	NO	YES	YES	NO	NO
Cluster SE	YES	YES	YES	YES	YES	YES	YES	YES

Table 6: For every year from 1995 to 2012, the sample correlation of every pair of weekly returns of firms in each decile is computed for each country. These sample correlations are then averaged across all firms in the same decile per year per country. The table shows the average of the yearly averages for each decile in each country.

Deciles	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
A) Developed Countries										
Australia	0.0566	0.0314	0.0270	0.0150	0.0167	0.0157	0.0149	0.0100	0.0039	0.0062
Austria	0.0844	0.0529	0.1041	0.0426	0.0307	0.0349	0.0174	0.0176	0.0067	0.0047
Belgium	0.0388	0.0314	0.0237	0.0494	0.0415	0.0251	0.0184	0.0067	0.0009	0.0012
Canada	0.1179	0.0770	0.0610	0.0462	0.0359	0.0291	0.0226	0.0188	0.0112	0.0042
Denmark	0.2200	0.1964	0.1971	0.1705	0.1280	0.0939	0.0924	0.0487	0.0443	0.0557
Finland	0.0804	0.0892	0.0623	0.0647	0.0340	0.0484	0.0323	0.0484	0.0290	0.0110
France	0.2891	0.2513	0.2102	0.1299	0.1291	0.0957	0.0712	0.0471	0.0379	0.0105
Germany	0.2593	0.2014	0.1303	0.0845	0.0881	0.0636	0.0489	0.0417	0.0179	0.0091
Greece	0.0637	0.0682	0.0909	0.0969	0.0920	0.1279	0.1479	0.1254	0.1558	0.1269
Holland	0.1303	0.0897	0.0638	0.0448	0.0478	0.0375	0.0152	0.0170	0.0056	0.0037
Hong Kong	0.2106	0.1872	0.1636	0.1342	0.1312	0.1117	0.1026	0.0923	0.0803	0.0601
Ireland	0.0540	0.0294	0.0428	0.0478	0.0226	0.0185	0.0083	0.0051	0.0003	0.0001
Italy	0.2254	0.2463	0.2245	0.2517	0.1682	0.1762	0.1767	0.1722	0.1504	0.1158
Japan	0.2813	0.2585	0.2466	0.2330	0.2166	0.2166	0.1739	0.1605	0.1377	0.1540
Korea	0.1313	0.0711	0.0499	0.0278	0.0418	0.0442	0.0337	0.0418	0.0421	0.0368
New Zealand	0.0643	0.0584	0.0407	0.0247	0.0188	0.0232	0.0076	0.0074	0.0029	0.0033
Norway	0.0987	0.0734	0.0405	0.0300	0.0285	0.0263	0.0220	0.0174	0.0113	0.0037
Portugal	0.0140	0.0315	0.0155	0.0389	0.0436	0.0270	0.0195	0.0119	0.0039	0.0027
Singapore	0.1787	0.1934	0.1657	0.1345	0.1465	0.1185	0.1309	0.0790	0.0511	0.0369
Spain	0.3764	0.2885	0.2719	0.2279	0.1586	0.1337	0.1370	0.1345	0.0682	0.0489
South Africa	0.0694	0.0446	0.0381	0.0270	0.0237	0.0164	0.0115	0.0077	0.0069	0.0032
Sweden	0.2812	0.2542	0.2263	0.1936	0.1504	0.1165	0.0945	0.1085	0.0796	0.0458
UK	0.2040	0.1779	0.1158	0.0769	0.0562	0.0522	0.0463	0.0321	0.0257	0.0160
US	0.2369	0.2249	0.1902	0.1732	0.1562	0.1330	0.1072	0.0839	0.0536	0.0373
Average	0.1569	0.1345	0.1168	0.0986	0.0836	0.0744	0.0647	0.0557	0.0428	0.0332
B) Developing Countries										
Brazil	0.1128	0.0880	0.0439	0.0416	0.0175	0.0092	0.0027	0.0027	0.0018	0.0017
Chile	0.1834	0.0943	0.0494	0.0284	0.0136	0.0068	0.0036	0.0034	-0.0002	0.0010
China	0.3626	0.3675	0.3865	0.3959	0.4216	0.4104	0.4265	0.4308	0.4187	0.3030
Colombia	0.1309	0.0145	0.0065	0.0040	0.0052	-0.0002	0.0039	0.0023	0.0009	0.0046
Czech	0.1061	0.0453	0.0396	0.0348	0.0337	0.0255	0.0175	0.0188	0.0038	0.0021
India	0.2538	0.2459	0.2206	0.2205	0.2043	0.1996	0.1956	0.1890	0.1654	0.1289
Indonesia	0.1532	0.0749	0.0552	0.0433	0.0340	0.0293	0.0256	0.0358	0.0231	0.0055
Malaysia	0.3026	0.2375	0.2281	0.1898	0.1846	0.1770	0.1556	0.0922	0.0805	0.0657
Mexico	0.1490	0.0621	0.0281	0.0137	0.0180	0.0082	0.0062	0.0024	0.0039	0.0007
Pakistan	0.2207	0.1126	0.0795	0.0625	0.0206	0.0206	0.0141	0.0035	0.0086	0.0046
Peru	0.1231	0.0314	0.0157	0.0200	0.0219	0.0235	0.0114	0.0248	0.0074	0.0037
Philippines	0.1802	0.1239	0.0594	0.0517	0.0409	0.0240	0.0573	0.0180	0.0215	0.0148
Poland	0.1503	0.1063	0.0766	0.0605	0.0834	0.0743	0.0589	0.0130	0.0194	0.0332
Taiwan	0.3092	0.2836	0.2719	0.2588	0.2495	0.2364	0.2189	0.1993	0.1511	0.0952
Thailand	0.2672	0.2834	0.2859	0.2166	0.2403	0.2132	0.2233	0.2029	0.1954	0.0719
Turkey	0.1587	0.1764	0.2139	0.2394	0.2316	0.2078	0.2558	0.2201	0.1979	0.1170
Average	0.1977	0.1467	0.1288	0.1176	0.1138	0.1041	0.1048	0.0912	0.0812	0.0534

Table 7: For every year from 1995 to 2012, the sample correlation of every pair of weekly returns of the largest firms in the first 3 deciles in each industry sector is computed for each country. These sample correlations are then averaged across the firms in the same industry per year per country. These numbers are then multiplied by the corresponding value weights in the first 3 deciles and the last 3 deciles to arrive at the Large Capital Index (LCI) and Small Capital Index (SCI) respectively for each country. The sum of these 2 indexes constitutes the LSCI. The following figures show the various countries' LCI and SCI.

	1995		**2000**		**2005**		**2010**	
	LCI	**SCI**	**LCI**	**SCI**	**LCI**	**SCI**	**LCI**	**SCI**
A) Developed Countries								
Australia	0.096	0.040	0.113	0.029	0.130	0.035	0.126	0.040
Austria	0.161	0.011	0.176	0.011	0.200	0.035	0.208	0.028
Belgium	0.310	-0.037	0.301	-0.030	0.303	0.044	0.308	0.047
Canada	0.098	0.031	0.125	0.032	0.124	0.026	0.127	0.026
Denmark	0.195	0.078	0.183	0.062	0.203	0.070	0.214	0.065
Finland	0.187	0.130	0.369	0.152	0.473	0.241	0.478	0.234
France	0.104	0.022	0.121	0.030	0.122	0.021	0.125	0.021
Germany	0.200	0.077	0.228	0.028	0.214	0.027	0.211	0.025
Greece	0.379	0.285	0.473	0.260	0.494	0.310	0.494	0.312
Holland	0.303	0.228	0.302	0.207	0.330	0.236	0.336	0.258
Hong Kong	0.203	0.150	0.265	0.167	0.201	0.203	0.286	0.145
Ireland	0.143	0.021	0.124	0.063	0.128	0.030	0.134	0.068
Italy	0.371	0.161	0.419	0.162	0.418	0.162	0.419	0.166
Japan	0.314	0.179	0.301	0.193	0.303	0.189	0.301	0.208
Korea	0.299	0.175	0.255	0.119	0.268	0.127	0.274	0.143
New Zealand	0.139	-0.016	0.138	-0.016	0.165	0.002	0.161	-0.009
Norway	0.198	0.112	0.262	0.094	0.216	0.101	0.217	0.098
Portugal	0.091	0.079	0.097	0.105	0.096	0.100	0.096	0.102
Singapore	0.253	0.403	0.259	0.419	0.284	0.219	0.275	0.102
Spain	0.256	0.129	0.227	0.119	0.249	0.156	0.256	0.164
Sweden	0.259	0.052	0.237	0.046	0.239	0.041	0.259	0.047
South Africa	0.191	0.087	0.207	0.129	0.223	0.141	0.221	0.121
UK	0.091	0.047	0.091	0.041	0.096	0.046	0.107	0.044
US	0.218	0.048	0.249	0.055	0.202	0.054	0.195	0.054
Average	0.211	0.104	0.230	0.103	0.237	0.109	0.243	0.105
B) Developing Countries								
Brazil	0.164	0.245	0.188	0.140	0.184	0.130	0.210	0.162
Chile	0.125	0.061	0.127	0.103	0.137	0.089	0.116	0.086
China	0.430	0.392	0.442	0.382	0.441	0.401	0.443	0.430
Columbia	0.125	0.108	0.122	0.055	0.123	0.040	0.121	-0.054
Czech	0.205	0.057	0.229	0.035	0.187	0.032	0.201	0.032
India	0.350	0.119	0.332	0.190	0.335	0.217	0.314	0.242
Indonesia	0.160	0.109	0.166	0.090	0.154	0.091	0.153	0.102
Malaysia	0.337	0.269	0.376	0.257	0.372	0.225	0.377	0.249
Mexico	0.191	0.098	0.218	0.122	0.247	0.126	0.241	0.145
Pakistan	0.248	0.054	0.279	0.055	0.374	0.055	0.387	0.056
Peru	0.035	-0.040	0.110	0.105	0.146	0.077	0.243	0.118
Philippines	0.250	0.090	0.276	0.087	0.256	0.059	0.229	0.075
Poland	0.319	0.034	0.244	0.039	0.225	0.031	0.187	0.019
Taiwan	0.370	0.169	0.373	0.183	0.381	0.182	0.376	0.162
Thailand	0.292	0.156	0.246	0.150	0.216	0.124	0.217	0.114
Turkey	0.374	0.196	0.345	0.162	0.347	0.167	0.376	0.162
Average	0.248	0.132	0.255	0.135	0.258	0.128	0.262	0.131

Table 8(a): Panel regressions of stock price synchronicity on economy variables using different panels, which include country-panel, decile-country panel and sector-country panel. Dependent stock price synchronicity variable is $\Upsilon_{d,j,y} = \log R^2_{d,j,y}/(1-R^2_{d,j,y})$ where $R^2_{d,j,y}$ is equal-weighted across stocks in each decile. Regression follows Eq. (9) and Eq. (10) in the paper. In addition to control, structural, GGI, IVOL, and LSCI variables, additional country-decile size variables of log average decile capitalization per firm, ACAP are included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. DMCI and IMCI represent the decile-based and industry sector-based (medium) correlation indices. Numbers in the parentheses indicate the t-statistics. Note that there are 40 countries (denoted by subscript j), 10 deciles (denoted by a subscript d), and 30 industry sectors (denoted by a subscript s), and 18 years (1995 to 2012) (denoted by a subscript y) that are used in creating the panels.

	Country Panel		**Decile-Country Panel**				**Sector-Country Panel**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LERW	LEQR	LERW	LEQR	LERW	LEQR	LERW	LEQR
DMCI / IMCI	1.895***	2.127***	0.871***	0.979***	0.872***	0.978***	1.306***	1.287***
	(5.06)	(5.78)	(3.42)	(3.15)	(3.41)	(3.14)	(4.47)	(4.30)
ACAP	-0.000	0.004	0.005***	0.007***	0.004***	0.006***	0.005***	0.005***
	(-0.01)	(0.93)	(10.32)	(10.52)	(7.21)	(7.33)	(4.25)	(3.96)
GGI	-0.023***	-0.015**	0.006	0.007	0.006	0.008	0.022**	0.028***
	(-3.08)	(-2.25)	(0.68)	(0.62)	(0.76)	(0.71)	(2.09)	(2.67)
IVOL	0.034	-0.022	-0.008	0.013	-0.008	0.012	-0.027	-0.022
	(0.68)	(-0.45)	(-0.27)	(0.35)	(-0.26)	(0.35)	(-0.80)	(-0.63)
LGDP	0.015	0.008	-0.060	-0.065	-0.071	-0.079	-0.067	-0.038
	(0.62)	(0.36)	(-0.93)	(-0.83)	(-1.09)	(-1.01)	(-0.87)	(-0.48)
LNSTOCK	-0.035	-0.035	0.155***	0.187***	0.139***	0.161***	0.101***	0.099***
	(-1.35)	(-1.42)	(7.23)	(7.04)	(6.54)	(6.13)	(9.77)	(8.84)
Lgeo	0.004	-0.006	0.179***	0.208***	0.189***	0.221***	-4.520***	-4.387***
	(0.37)	(-0.57)	(3.39)	(3.40)	(3.58)	(3.62)	(-11.35)	(-11.02)
Vgdpg	-16.600	-12.914	16.506	11.442	15.693	10.059	11.940	5.240
	(-0.77)	(-0.62)	(1.08)	(0.58)	(1.03)	(0.51)	(0.76)	(0.32)
ECI	0.691***	0.704***	0.059	0.043	0.054	0.034	0.117	0.022
	(2.97)	(3.17)	(0.40)	(0.23)	(0.36)	(0.19)	(0.70)	(0.13)
IHHI	-0.074	-0.234	-0.351	-0.329	-0.571	-0.650	-0.103	-0.090
	(-0.17)	(-0.52)	(-0.73)	(-0.54)	(-1.16)	(-1.05)	(-0.52)	(-0.50)
FHHI	0.933	1.239*	0.322	0.280	0.155	0.039	-0.270	-0.276
	(1.39)	(1.79)	(0.48)	(0.33)	(0.23)	(0.05)	(-0.57)	(-0.58)
_cons	-3.059***	-2.860***	-6.119***	-8.214***	-6.194***	-8.353***	68.328***	65.731***
	(-9.04)	(-9.07)	(-12.46)	(-14.31)	(-12.65)	(-14.58)	(10.98)	(10.63)
N	720	720	7200	7200	7200	7200	15218	15218
R-sq	0.237	0.261	0.504	0.470	0.511	0.480	0.430	0.376
adj. R-sq	0.206	0.231	0.499	0.465	0.505	0.474	0.427	0.373
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	NO	NO	YES	YES	YES	YES	YES	YES
Industry Fixed Effect	NO	NO	YES	YES	YES	YES	YES	YES
Decile Fixed Effect	NO	NO	NO	NO	YES	YES	NO	NO
Cluster SE	YES	YES	YES	YES	YES	YES	YES	YES

Table 8(b): Panel regressions of stock price synchronicity on economy variables using different panels, which include country-panel, decile-country panel and sector-country panel. Dependent stock price synchronicity variable is $\varUpsilon_{d,j,y} = \log\, R^2_{d,j,y}/(1 - R^2_{d,j,y})$ where $R^2_{d,j,y}$ is equal-weighted across stocks in each decile. Regression follows Eq. (9) and Eq. (10) in the paper. In addition to control, structural, GGI, IVOL, and LSCI variables, additional country-decile size variables of log average decile capitalization per firm, ACAP are included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. DSCI and ISCI represent the decile-based and industry sector-based (Range) correlation indices. Numbers in the parentheses indicate the t-statistics. Note that there are 40 countries (denoted by subscript j), 10 deciles (denoted by a subscript d), and 30 industry sectors (denoted by a subscript s), and 18 years (1995 to 2012) (denoted by a subscript y) that are used in creating the panels.

	Country Panel		Decile-Country Panel				Sector-Country Panel	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LERW	LEQR	LERW	LEQR	LERW	LEQR	LERW	LEQR
DSCI / ISCI	2.379***	2.472***	1.161***	1.386***	1.141***	1.353***	1.302***	1.374***
	(7.24)	(7.57)	(4.47)	(4.38)	(4.39)	(4.27)	(4.51)	(4.61)
ACAP	0.002	0.007	0.005***	0.007***	0.004***	0.006***	0.005***	0.005***
	(0.46)	(1.46)	(10.28)	(10.48)	(7.18)	(7.29)	(4.16)	(3.86)
GGI	-0.018**	-0.011*	0.007	0.008	0.007	0.009	0.024**	0.029***
	(-2.51)	(-1.69)	(0.80)	(0.73)	(0.87)	(0.81)	(2.23)	(2.82)
IVOL	-0.012	-0.062	-0.021	-0.005	-0.020	-0.004	-0.025	-0.025
	(-0.25)	(-1.35)	(-0.71)	(-0.15)	(-0.66)	(-0.11)	(-0.74)	(-0.70)
LGDP	0.013	0.007	-0.062	-0.067	-0.072	-0.081	-0.088	-0.057
	(0.56)	(0.30)	(-0.94)	(-0.83)	(-1.10)	(-1.01)	(-1.14)	(-0.72)
LNSTOCK	-0.048*	-0.048**	0.162***	0.195***	0.145***	0.170***	0.103***	0.101***
	(-1.93)	(-2.00)	(7.63)	(7.42)	(6.94)	(6.51)	(9.85)	(8.94)
Lgeo	0.005	-0.005	0.176***	0.204***	0.186***	0.217***	-4.456***	-4.320***
	(0.54)	(-0.48)	(3.30)	(3.28)	(3.49)	(3.51)	(-11.07)	(-10.76)
Vgdpg	-21.063	-15.809	20.328	15.918	19.490	14.483	16.393	9.949
	(-1.00)	(-0.77)	(1.36)	(0.82)	(1.29)	(0.75)	(1.03)	(0.61)
ECI	0.635***	0.659***	0.076	0.061	0.071	0.052	0.133	0.037
	(2.84)	(3.10)	(0.52)	(0.34)	(0.49)	(0.29)	(0.81)	(0.22)
IHHI	-0.199	-0.339	-0.237	-0.194	-0.455	-0.514	-0.073	-0.063
	(-0.46)	(-0.77)	(-0.50)	(-0.33)	(-0.95)	(-0.85)	(-0.38)	(-0.35)
FHHI	1.079*	1.363**	0.197	0.134	0.034	-0.101	-0.402	-0.391
	(1.73)	(2.11)	(0.29)	(0.16)	(0.05)	(-0.12)	(-0.88)	(-0.85)
_cons	-2.991***	-2.779***	-6.114***	-8.202***	-6.189***	-8.342***	67.507***	64.837***
	(-9.28)	(-9.21)	(-12.59)	(-14.47)	(-12.79)	(-14.75)	(10.72)	(10.39)
N	720	720	7200	7200	7200	7200	15218	15218
R-sq	0.280	0.299	0.507	0.473	0.514	0.483	0.431	0.378
adj. R-sq	0.251	0.271	0.502	0.468	0.508	0.477	0.427	0.374
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	NO	NO	YES	YES	YES	YES	YES	YES
Industry Fixed Effect	NO	NO	YES	YES	YES	YES	YES	YES
Decile Fixed Effect	NO	NO	NO	NO	YES	YES	NO	NO
Cluster SE	YES	YES	YES	YES	YES	YES	YES	YES

Table 9: Panel regressions of stock price synchronicity on economy variables using different panels, which include country-panel, decile-country panel and sector-country panel. Dependent stock price synchronicity variable is $\Upsilon_{d,j,y} = \log R^2_{d,j,y}/(1 - R^2_{d,j,y})$ where $R^2_{d,j,y}$ is equal-weighted across stocks in each decile. Regression follows Eq. (9) and Eq. (10) in the paper. In addition to control, structural, GGI, IVOL, and LSCI variables, additional country-decile size variables of log average decile capitalization per firm, ACAP are included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. gMCI and gSCI represent the decile-based and industry sector-based (Range) correlation indices, where g = (D, I) and D = Decile, and I = Sector. Numbers in the parentheses indicate the t-statistics. Note that there are 40 countries (denoted by subscript j), 10 deciles (denoted by a subscript d), and 30 industry sectors (denoted by a subscript s), and 18 years (1995 to 2012) (denoted by a subscript y) that are used in creating the panels.

	Decile-Country Panel				**Industry Sector – Country Panel**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LERW	LEQR	LERW	LEQR	LERW	LEQR	LERW	LEQR
GGI x gMCI / GGI x gSCI	0.334***	0.383***	0.351***	0.412***	0.299***	0.297***	0.312***	0.324***
	(6.51)	(5.96)	(6.27)	(5.90)	(4.73)	(4.51)	(4.88)	(4.89)
DMCI / IMCI	1.313***	1.484***			1.726***	1.704***		
	(5.17)	(4.79)			(5.99)	(5.79)		
DSCI / ISCI			1.563***	1.857***			1.727***	1.816***
			(6.08)	(5.94)			(6.00)	(6.13)
ACAP	0.005***	0.007***	0.005***	0.007***	0.006***	0.005***	0.005***	0.005***
	(10.26)	(10.47)	(10.20)	(10.41)	(4.44)	(4.13)	(4.31)	(4.00)
GGI	0.004	0.005	0.007	0.008	0.023**	0.028***	0.026**	0.031***
	(0.48)	(0.44)	(0.84)	(0.76)	(2.18)	(2.80)	(2.43)	(3.04)
IVOL	0.004	0.026	-0.001	0.018	-0.020	-0.015	-0.014	-0.012
	(0.14)	(0.72)	(-0.02)	(0.50)	(-0.58)	(-0.42)	(-0.39)	(-0.34)
LGDP	-0.045	-0.048	-0.047	-0.049	-0.052	-0.023	-0.080	-0.049
	(-0.74)	(-0.64)	(-0.75)	(-0.65)	(-0.70)	(-0.30)	(-1.10)	(-0.66)
LNSTOCK	0.168***	0.202***	0.179***	0.216***	0.107***	0.105***	0.110***	0.108***
	(7.87)	(7.64)	(8.45)	(8.20)	(10.36)	(9.45)	(10.54)	(9.72)
Lgeo	0.195***	0.226***	0.190***	0.220***	-4.648***	-4.514***	-4.521***	-4.387***
	(3.77)	(3.77)	(3.77)	(3.76)	(-11.27)	(-10.98)	(-10.79)	(-10.51)
Vgdpg	6.876	0.425	15.250	9.968	0.485	-6.138	8.401	1.647
	(0.44)	(0.02)	(1.01)	(0.51)	(0.03)	(-0.37)	(0.53)	(0.10)
ECI	0.038	0.018	0.064	0.047	0.092	-0.003	0.111	0.014
	(0.27)	(0.10)	(0.46)	(0.27)	(0.56)	(-0.02)	(0.68)	(0.08)
IHHI	-0.326	-0.300	-0.157	-0.100	-0.114	-0.102	-0.071	-0.061
	(-0.66)	(-0.48)	(-0.33)	(-0.17)	(-0.57)	(-0.56)	(-0.38)	(-0.34)
FHHI	0.448	0.424	0.371	0.338	-0.374	-0.379	-0.420	-0.410
	(0.66)	(0.50)	(0.53)	(0.39)	(-0.79)	(-0.80)	(-0.91)	(-0.88)
_cons	-6.481***	-8.628***	-6.521***	-8.678***	70.238***	67.628***	68.452***	65.819***
	(-13.20)	(-15.06)	(-12.99)	(-14.79)	(10.89)	(10.56)	(10.41)	(10.09)
N	7200	7200	7200	7200	15218	15218	15218	15218
R-sq	0.516	0.480	0.521	0.485	0.438	0.383	0.440	0.386
adj. R-sq	0.512	0.475	0.517	0.480	0.434	0.379	0.436	0.382
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Industry Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Cluster SE	YES	YES	YES	YES	YES	YES	YES	YES

Table 10: Panel regressions of stock price synchronicity on economy variables using different panels, which include country-panel, decile-country panel and sector-country panel. Dependent stock price synchronicity variable is $\Upsilon_{d,j,y} = \log R^2_{d,j,y}/(1 - R^2_{d,j,y})$ where $R^2_{d,j,y}$ is equal-weighted across stocks in each decile. Regression follows Eq. (9) and Eq. (10) in the paper. In addition to control, structural, GGI, IVOL, and LSCI variables, additional country-decile size variables of log average decile capitalization per firm, ACAP are included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. gSCI and gSCI represent the decile-based and industry sector-based (Range) correlation indices, where g = (D, I) and D = Decile, and I = Sector. GFC2008 is a dummy variable that has a value of 1 for the post-global financial crisis period from 2008 to 2012; and otherwise 0. Numbers in the parentheses indicate the t-statistics. Note that there are 40 countries (denoted by subscript j), 10 deciles (denoted by a subscript d), and 30 industry sectors (denoted by a subscript s), and 18 years (1995 to 2012) (denoted by a subscript y) that are used in creating the panels.

	Decile-Country Panel				**Industry Sector – Country Panel**			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LERW	LEQR	LERW	LEQR	LERW	LEQR	LERW	LEQR
GFC2008 x gMCI / GFC2008 x gSCI	-0.448	-0.515	0.126	0.195	0.116	0.471	0.065	0.493
	(-0.75)	(-0.72)	(0.21)	(0.27)	(0.19)	(0.78)	(0.11)	(0.87)
DMCI / IMCI	0.910***	1.023***			1.298***	1.254***		
	(3.59)	(3.30)			(4.35)	(4.11)		
DSCI / ISCI			1.153***	1.374***			1.299***	1.352***
			(4.41)	(4.29)			(4.44)	(4.47)
ACAP	0.005***	0.007***	0.005***	0.007***	0.005***	0.005***	0.005***	0.005***
	(10.34)	(10.55)	(10.28)	(10.48)	(4.24)	(3.93)	(4.15)	(3.82)
GGI	0.006	0.007	0.007	0.008	0.022**	0.028***	0.024**	0.029***
	(0.71)	(0.65)	(0.80)	(0.73)	(2.08)	(2.66)	(2.23)	(2.81)
IVOL	-0.009	0.011	-0.020	-0.004	-0.027	-0.021	-0.025	-0.022
	(-0.31)	(0.31)	(-0.67)	(-0.12)	(-0.78)	(-0.58)	(-0.71)	(-0.60)
LGDP	-0.060	-0.064	-0.062	-0.067	-0.067	-0.036	-0.088	-0.059
	(-0.93)	(-0.83)	(-0.95)	(-0.84)	(-0.86)	(-0.45)	(-1.14)	(-0.73)
LNSTOCK	0.156***	0.188***	0.161***	0.194***	0.101***	0.098***	0.103***	0.100***
	(7.20)	(7.01)	(7.44)	(7.25)	(9.61)	(8.62)	(9.59)	(8.58)
Lgeo	0.179***	0.207***	0.176***	0.204***	-4.524***	-4.406***	-4.457***	-4.327***
	(3.40)	(3.40)	(3.30)	(3.28)	(-11.38)	(-11.24)	(-11.09)	(-10.96)
Vgdpg	17.018	12.031	20.289	15.857	11.897	5.067	16.461	10.469
	(1.11)	(0.61)	(1.35)	(0.82)	(0.76)	(0.31)	(1.04)	(0.65)
ECI	0.066	0.051	0.074	0.058	0.115	0.016	0.133	0.032
	(0.44)	(0.28)	(0.51)	(0.32)	(0.69)	(0.09)	(0.80)	(0.19)
IHHI	-0.346	-0.323	-0.234	-0.189	-0.102	-0.087	-0.072	-0.053
	(-0.73)	(-0.54)	(-0.50)	(-0.32)	(-0.51)	(-0.47)	(-0.38)	(-0.30)
FHHI	0.322	0.280	0.199	0.138	-0.269	-0.272	-0.399	-0.369
	(0.48)	(0.33)	(0.29)	(0.16)	(-0.57)	(-0.57)	(-0.87)	(-0.79)
_cons	-6.122***	-8.218***	-6.110***	-8.195***	68.399***	66.019***	67.523***	64.957***
	(-12.47)	(-14.32)	(-12.63)	(-14.55)	(11.02)	(10.86)	(10.74)	(10.59)
N	7200	7200	7200	7200	15218	15218	15218	15218
R-sq	0.504	0.470	0.507	0.473	0.430	0.377	0.431	0.378
adj. R-sq	0.499	0.465	0.502	0.468	0.427	0.373	0.427	0.374
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Industry Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Cluster SE	YES	YES	YES	YES	YES	YES	YES	YES

Table 11: Panel regressions of stock price synchronicity on economy variables using different panels, which include decile-country panel and sector-country panel. Dependent stock price synchronicity variable is $\Upsilon_{d,j,y} = \log\, R^2_{d,j,y}/(1 - R^2_{d,j,y})$ where $R^2_{d,j,y}$ is equal-weighted across stocks in each decile. Regression follows Eq. (9) and Eq. (10) in the paper. In addition to control, structural, GGI, IVOL, and LSCI variables, additional country-decile size variables of log average decile capitalization per firm, ACAP are included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. DACI and IACI represent the average decile-based and the average industry sector-based correlation indices, respectively. Numbers in the parentheses indicate the t-statistics. Note that there are 40 countries (denoted by subscript j), 10 deciles (denoted by a subscript d), and 30 industry sectors (denoted by a subscript s), and 18 years (1995 to 2012) (denoted by a subscript y) that are used in creating the panels.

	Decile-Country Panel				**Sector-Country Panel**	
	(1)	(2)	(3)	(4)	(5)	(6)
	LERW	LEQR	LERW	LEQR	LERW	LEQR
DACI	1.075***	1.430***	1.040***	1.298***		
	(8.49)	(8.99)	(6.60)	(6.71)		
IACI					0.913***	1.053***
					(8.59)	(9.51)
ACAP	0.003***	0.004***	0.004***	0.005***	0.004***	0.004***
	(5.60)	(5.73)	(6.17)	(6.31)	(3.28)	(2.87)
GGI	0.006	0.007	0.006	0.007	0.024**	0.030***
	(0.73)	(0.64)	(0.75)	(0.69)	(2.26)	(2.84)
IVOL	-0.018	-0.009	-0.017	-0.004	-0.003	-0.005
	(-0.66)	(-0.26)	(-0.62)	(-0.13)	(-0.10)	(-0.15)
LGDP	-0.051	-0.051	-0.049	-0.052	-0.083	-0.050
	(-0.78)	(-0.65)	(-0.76)	(-0.66)	(-1.09)	(-0.65)
LNSTOCK	0.142***	0.170***	0.140***	0.163***	0.103***	0.101***
	(6.67)	(6.47)	(6.65)	(6.24)	(9.99)	(9.09)
Lgeo	0.174***	0.199***	0.174***	0.201***	-4.562***	-4.435***
	(3.32)	(3.27)	(3.32)	(3.31)	(-11.30)	(-10.93)
Vgdpg	18.456	13.778	18.267	13.114	14.518	8.238
	(1.22)	(0.71)	(1.21)	(0.67)	(0.91)	(0.50)
ECI	0.066	0.046	0.064	0.044	0.128	0.029
	(0.44)	(0.26)	(0.44)	(0.24)	(0.75)	(0.17)
IHHI	-0.463	-0.482	-0.483	-0.543	-0.116	-0.115
	(-1.00)	(-0.83)	(-1.02)	(-0.91)	(-0.60)	(-0.63)
FHHI	-0.326	-0.570	-0.222	-0.424	-0.808	-0.838
	(-0.48)	(-0.68)	(-0.34)	(-0.51)	(-1.48)	(-1.48)
_cons	-6.078***	-8.141***	-6.100***	-8.225***	69.171***	66.636***
	(-12.48)	(-14.34)	(-12.60)	(-14.57)	(10.95)	(10.56)
N	7200	7200	7200	7200	15218	15218
R-sq	0.518	0.486	0.519	0.488	0.436	0.385
adj. R-sq	0.513	0.481	0.514	0.483	0.432	0.381
Year Fixed Effect	YES	YES	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES	YES	YES
Industry Fixed Effect	YES	YES	YES	YES	YES	YES
Decile Fixed Effect	NO	NO	YES	YES	NO	NO
Cluster SE	YES	YES	YES	YES	YES	YES

Table 12: Panel regressions of stock price synchronicity on economy variables using firm-level panel. Dependent stock price synchronicity variable is $\Upsilon_{d,j,y} = \log\ R^2_{d,j,y}/(1 - R^2_{d,j,y})$ where $R^2_{d,j,y}$ is equal-weighted across stocks in each decile. Regression follows Eq. (9) and Eq. (10) in the paper. In addition to control, structural, GGI, IVOL, and LSCI variables, additional country-decile size variables of log average decile capitalization per firm, ACAP are included. Control variables are GDP and NSTK. Structural variables include geographical size, variance of GDP quarterly growth rate, industry Herfindahl index, firm Herfindahl index, and earnings co-movement in each country. gMCI and gSCI represent the decile-based and industry sector-based (Range) correlation indices, where g = (D, I) and D = Decile, and I = Sector. DACI and IACI represent the average decile-based and the average industry sector-based correlation indices, respectively. Numbers in the parentheses indicate the t-statistics.

	(1)	**(2)**	**(3)**	**(4)**
	LRSQ	LRSQ	LRSQ	LRSQ
DMCI	2.249***			
	(5.09)			
DSCI		2.321***		
		(5.39)		
DACI			2.646***	
			(11.47)	
IACI				2.035***
				(8.74)
size	0.001***	0.001***	0.000***	0.001***
	(6.77)	(6.78)	(3.72)	(6.78)
GGI	0.057***	0.057***	0.055***	0.058***
	(3.24)	(3.23)	(3.17)	(3.27)
IVOL	-0.059	-0.063	-0.085	-0.049
	(-1.03)	(-1.09)	(-1.58)	(-0.87)
LGDP	0.419***	0.380***	0.412***	0.361**
	(2.88)	(2.66)	(2.91)	(2.53)
Lgeo	-7.930***	-7.791***	-7.934***	-7.871***
	(-21.28)	(-20.87)	(-21.05)	(-21.17)
Vgdpg	-5.416	0.168	-2.259	-1.093
	(-0.29)	(0.01)	(-0.12)	(-0.06)
ECI	0.121	0.117	0.127	0.119
	(0.45)	(0.44)	(0.49)	(0.44)
ihhi	-0.024	0.050	-0.102	-0.046
	(-0.16)	(0.32)	(-0.70)	(-0.31)
fhhi	2.299***	2.233***	-0.556	1.672**
	(2.65)	(2.60)	(-0.71)	(2.05)
stk_ret	-0.008	-0.008	-0.011	-0.008
	(-1.17)	(-1.19)	(-1.55)	(-1.23)
stk_std	-0.124***	-0.124***	-0.076***	-0.123***
	(-9.16)	(-9.14)	(-6.34)	(-9.26)
_cons	116.572***	114.757***	116.682***	116.214***
	(21.48)	(20.96)	(21.17)	(21.40)
N	475701	475701	475701	475701
R-sq	0.238	0.238	0.246	0.240
adj. R-sq	0.238	0.238	0.246	0.239
Year Fixed Effect	YES	YES	YES	YES
Country Fixed Effect	YES	YES	YES	YES
Sector Fixed Effect	YES	YES	YES	YES
Cluster SE	YES	YES	YES	YES

Figures: 1 a, b, c, d Error-Weighted Stock Price Synchronicity ERW is plotted against Good Government Index for 40 Countries in 1995, 2000, 2005, 2010. GGI incorporates the "corruption perception index" (CPI) published by Transparency International and a component indicator representing "property right" in the Index of Economic Freedom (IEF), an index jointly published by the Wall Street Journal and the Heritage Foundation. The two series add up to a score between 0 and 20 for the GGI. Higher GGI denotes a higher observance of investor property right in the country.

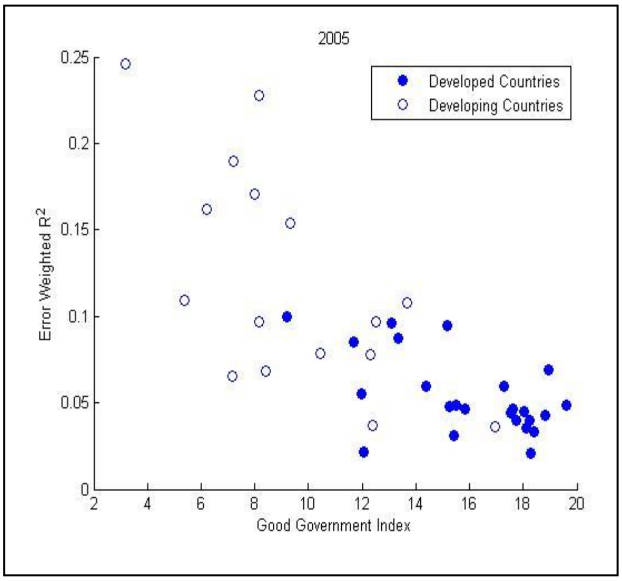


Figure 1a

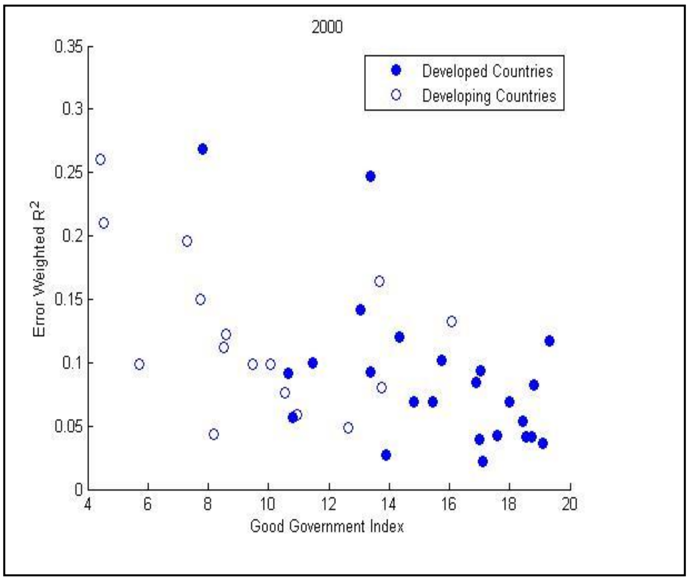


Figure 1b

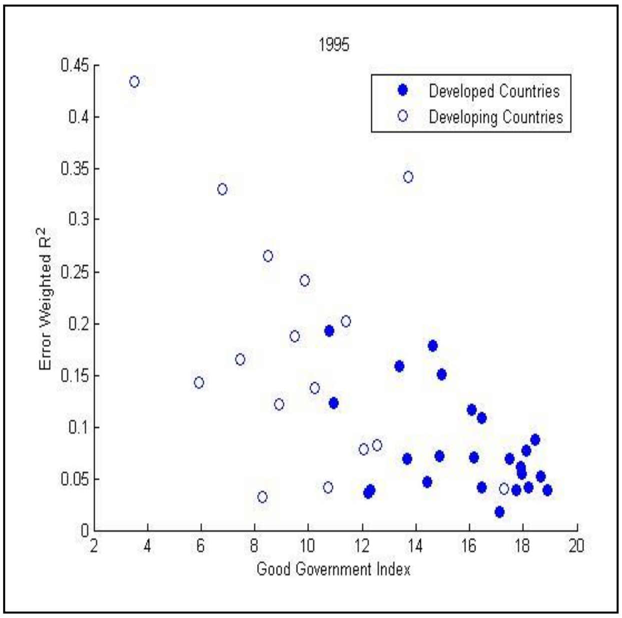


Figure 1c

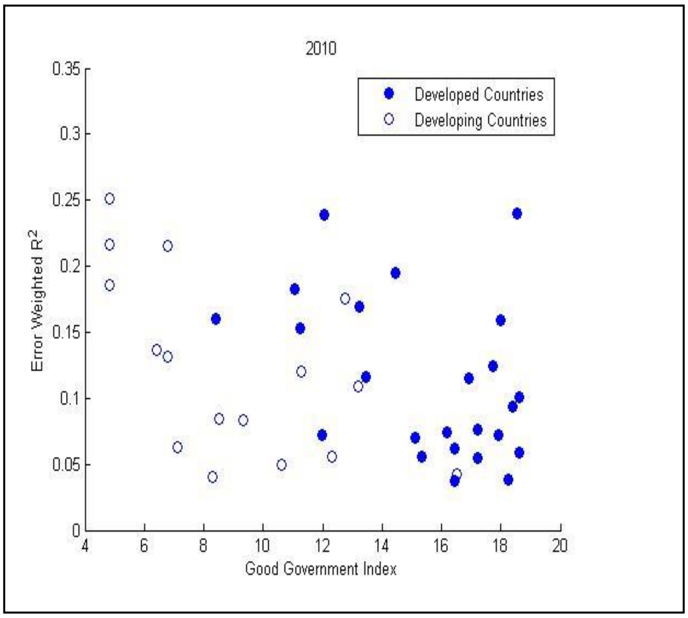


Figure 1d

Note: Graphically, EQW plots versus GGI do not show any significant variation from these ERW plots, so they are not reported here to economize on space.

Figure 2a: The figure shows 8 panels with plots of time-averaged estimated coefficients $\hat{\beta}_{1,dj} + \hat{\beta}_{2,dj}$ in years 1995-2000, 2001-2006, and 2007-2012 versus the 1st decile to the 10th decile in terms of firm capitalizations in each of the indicated country. The plots are normalized to start at 1 by dividing by $\hat{\beta}_{1,1j} + \hat{\beta}_{2,1j}$. The examples of U.S., U.K., France, Holland, Australia, Italy, Germany, and Hong Kong are representative of developed countries.

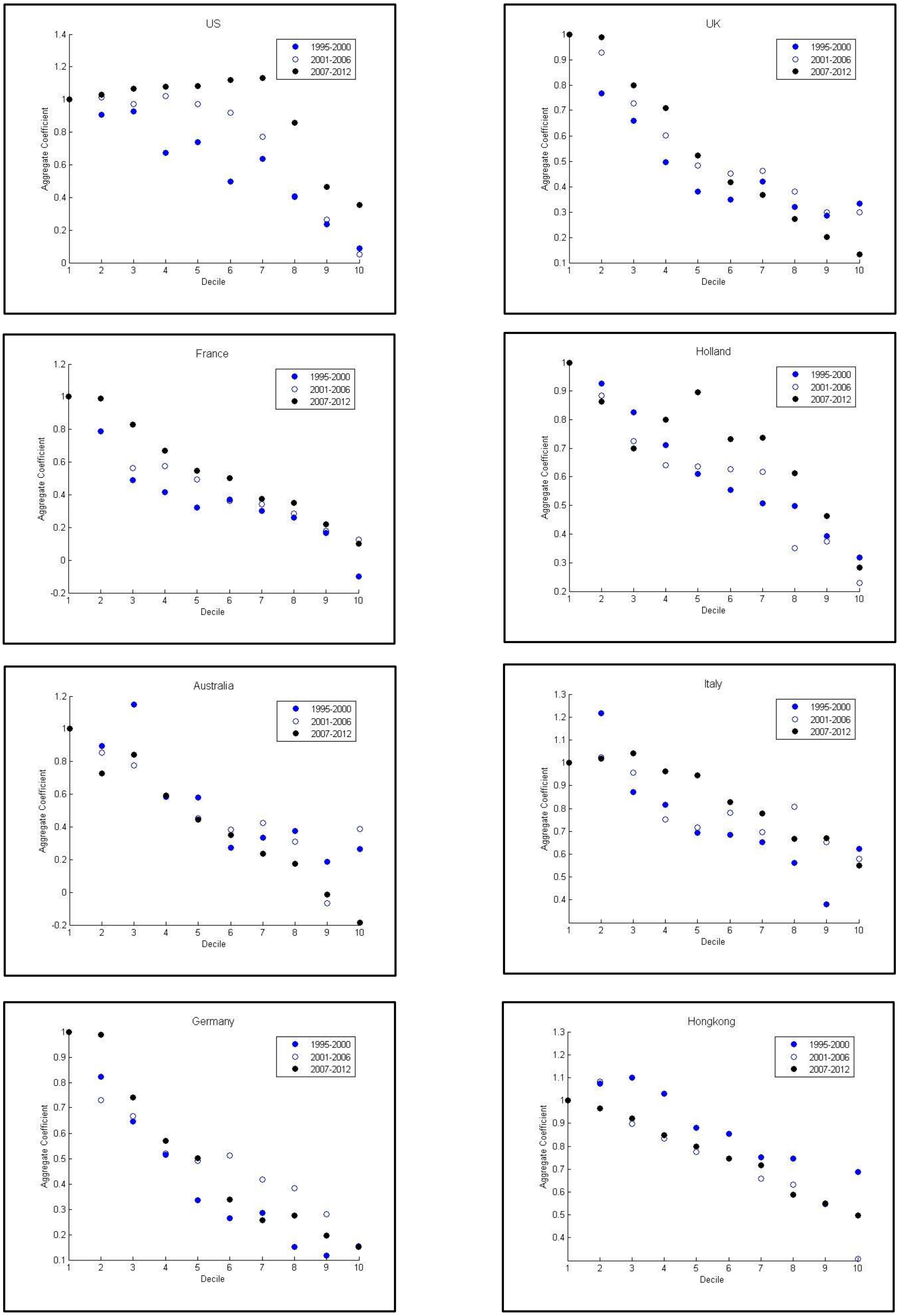
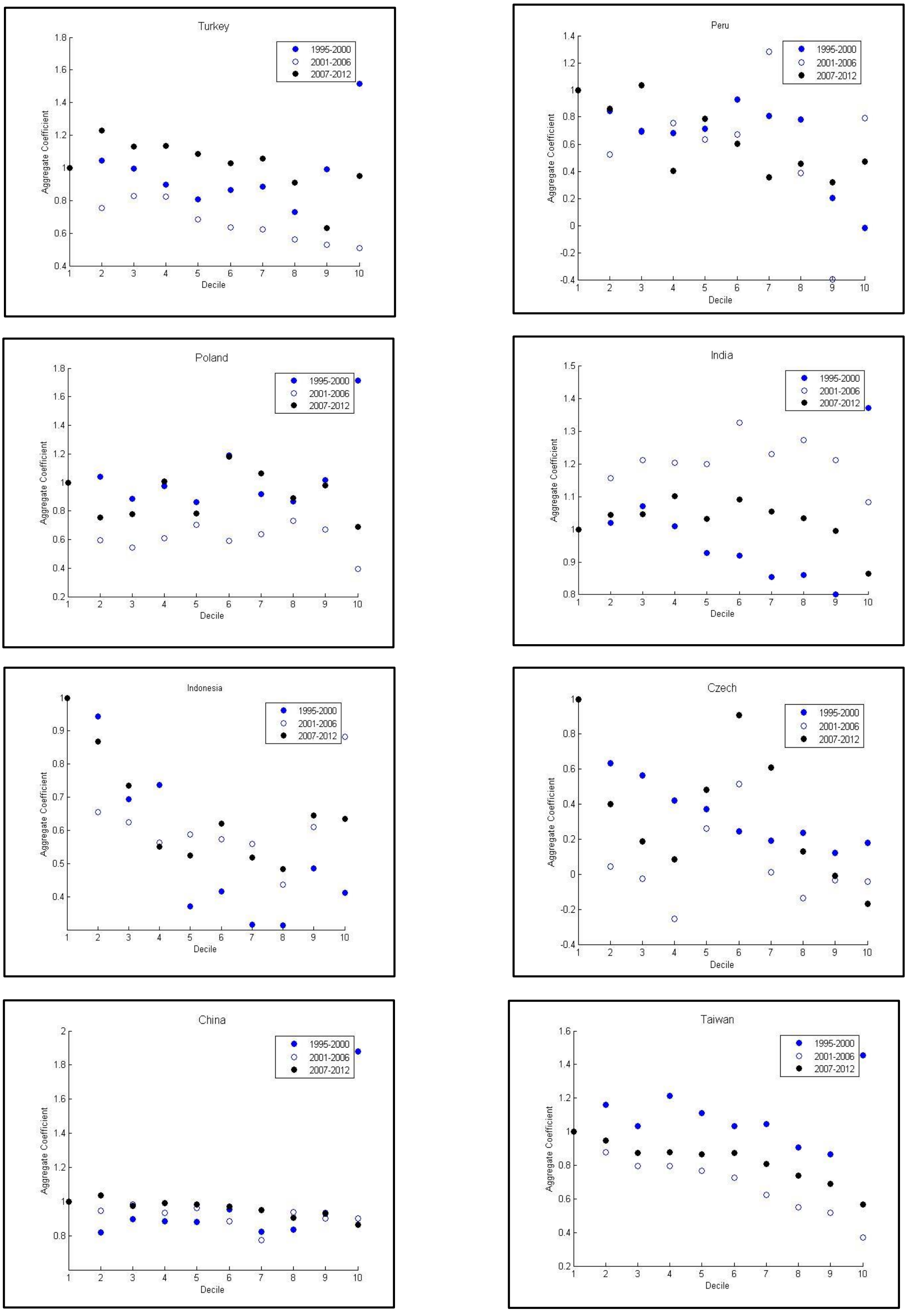


Figure 2b: The figure shows 8 panels with plots of time-averaged estimated coefficients $\hat{\beta}_{1,dj} + \hat{\beta}_{2,dj}$ in years 1995-2000, 2001-2006, and 2007-2012 versus the 1st decile to the 10th decile in terms of firm capitalizations in each of the indicated country. The plots are normalized to start at 1 by dividing by$\hat{\beta}_{1,1j} + \hat{\beta}_{2,1j}$. The examples of Turkey, Peru, Poland, India, Indonesia, Czech, China, and Taiwan are representative of developing countries.



Appendix 1: List of Key Variables and their symbols

Description	Abbreviations
Error Weighted stock price synchronicity (R^2)	ERW
Log-Transform of ERW	LERW
Equal Weighted Stock Price Synchronicity (R^2)	EQW
Log-Transform of EQW	LEQW
Log-per capita GDP	GDP
Log number of listed stock in country j	NSTK
Log-Geography Size	GEO
Variance of GDP Growth	VGDP
Industry-level Herfindahl Index	IHHI
Country-level Herfindahl Index	FHHI
Earning co-movement index	ECI
Good Government index	GGI
Log-Average Market Capitalization of Stocks in Country j	ACAP
Local Stock Index Volatility	IVOL
Decile-Based Medium Correlation Index	DMCI
Decile-Based Range Correlation Index	DSCI
Sector-Based Medium Correlation Index	IMCI
Sector-Based Range Correlation Index	ISCI

Note: The table summarizes the list of variables used in the empirical tests. They are represented by the abbreviations as shown on the right-hand column.

Appendix 2: Industry Sector Classification

Sector	Code	Industry Description
1	Food	Food Products
2	Beer	Beer & Liquor
3	Smoke	Tobacco Products
4	Games	Recreation
5	Books	Printing and Publishing
6	Hshld	Consumer Goods
7	Clths	Apparel
8	Hlth	Healthcare, Medical Equipment, Pharmaceutical Products
9	Chems	Chemicals
10	Txtls	Textiles
11	Cnstr	Construction and Construction Materials
12	Steel	Steel Works Etc
13	FabPr	Fabricated Products and Machinery
14	ElcEq	Electrical Equipment
15	Autos	Automobiles and Trucks
16	Carry	Aircraft, ships, and railroad equipment
17	Mines	Precious Metals, Non-Metallic, and Industrial Metal Mining
18	Coal	Coal
19	Oil	Petroleum and Natural Gas
20	Util	Utilities
21	Telcm	Communication
22	Servs	Personal and Business Services
23	BusEq	Business Equipment
24	Paper	Business Supplies and Shipping Containers
25	Trans	Transportation
26	Whlsl	Wholesale
27	Rtail	Retail
28	Meals	Restaraunts, Hotels, Motels
29	Fin	Banking, Insurance, Real Estate, Trading
30	Other	Everything Else

Note: the table shows a list of 30 industry sectors classified in the Professor French's website.
Source: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_30_ind_port_old.html

Appendix 3: Descriptive Statistics for Different Panels

Variable	Observation	Mean	S.D.	Min	25%tile	Mdn	75%tile	Max
i) Country Level:								
EQR	720	0.070	0.050	0.020	0.040	0.050	0.090	0.400
EWR	720	0.070	0.050	0.010	0.040	0.050	0.090	0.410
LEQR	720	-2.700	0.630	-4.040	-3.170	-2.880	-2.260	-0.420
LEWR	720	-2.770	0.650	-4.860	-3.220	-2.920	-2.340	-0.370
DMCI	720	0.160	0.090	0.000	0.090	0.140	0.200	0.620
DSCI	720	0.140	0.100	0.000	0.070	0.110	0.180	0.620
LGDP	720	9.380	1.290	5.970	8.450	9.910	10.390	11.510
LNSTOCK	720	5.450	1.460	1.390	4.540	5.390	6.450	9.050
LGEO	720	12.620	2.060	6.540	11.440	12.650	13.720	16.030
VGDPG	720	0.000	0.000	0.000	0.000	0.000	0.000	0.010
ECI	720	0.290	0.110	0.020	0.210	0.270	0.350	0.780
GGI	720	13.170	4.270	3.200	10.060	13.400	17.230	19.600
IHHI	720	0.180	0.100	0.060	0.110	0.140	0.210	0.720
FHHI	720	0.070	0.080	0.000	0.020	0.040	0.080	0.650
IVOL	720	1.630	0.720	0.460	1.130	1.500	1.990	5.560
ACAP(billions US$)	720	4.170	5.100	0.030	1.040	2.080	5.300	35.430
ii) Decile Level								
EQR	7200	0.070	0.060	0.000	0.040	0.050	0.090	0.590
EWR	7200	0.070	0.060	0.000	0.030	0.050	0.090	0.600
LEQR	7200	-2.780	0.760	-9.580	-3.230	-2.870	-2.330	0.380
LEWR	7200	-4.220	0.980	-12.010	-4.810	-4.310	-3.630	-0.030
DACI	7200	0.140	0.130	0.000	0.040	0.100	0.210	0.890
IACI	7200	0.140	0.110	0.000	0.070	0.110	0.190	0.740
ACAP	7200	3.710	15.540	0.000	0.050	0.170	0.720	210.800
IHHI(decile disagg)	7200	0.030	0.060	0.000	0.010	0.010	0.030	0.690
FHHI(decile disagg)	7200	0.000	0.020	0.000	0.000	0.000	0.000	0.520
DMCI	7200	0.150	0.090	0.000	0.090	0.130	0.200	0.620
DSCI	7200	0.140	0.100	0.000	0.070	0.110	0.180	0.620
LNSTOCK	7200	3.130	1.460	-1.100	2.200	3.090	4.190	7.020
iii) Sector Level								
EQR	15218	0.070	0.060	0.000	0.040	0.050	0.090	0.800
EWR	15218	0.070	0.060	0.000	0.030	0.050	0.090	0.800
LEQR	15218	-2.820	0.840	-10.330	-3.310	-2.860	-2.320	1.390
LEWR	15218	-2.910	0.920	-11.350	-3.450	-2.930	-2.350	1.390
DACI	15218	0.150	0.110	0.000	0.060	0.120	0.200	0.660
IACI	15218	0.150	0.140	0.000	0.050	0.110	0.210	0.980
ACAP	15218	2.540	7.530	0.000	0.180	0.530	1.790	160.990
IHHI(sector disagg)	15218	0.010	0.030	0.000	0.000	0.000	0.000	0.690
FHHI(sector disagg)	15218	0.000	0.010	0.000	0.000	0.000	0.000	0.530
IMCI	15218	0.150	0.090	0.000	0.080	0.130	0.200	0.620
ISCI	15218	0.140	0.100	0.000	0.070	0.110	0.180	0.620
LNSTOCK	15218	2.340	1.300	0.690	1.390	2.200	3.140	7.490
iv) Firm Level								
RSQ	475701	0.060	0.080	0.000	0.010	0.030	0.080	0.980
DACI	475701	0.130	0.110	0.000	0.040	0.090	0.190	0.890
IACI	475701	0.120	0.100	0.000	0.050	0.080	0.170	0.980
STK_RET(%)	475701	-0.140	1.370	-5.170	-0.700	-0.020	0.520	4.180
STK_STD(%)	475701	0.790	0.730	0.000	0.400	0.610	0.960	30.340
SIZE(billions US$)	475701	4.770	53.250	0.000	0.030	0.150	0.670	3765.040
IHHI(firm disagg)	475701	0.020	0.040	0.000	0.000	0.000	0.010	0.690
FHHI(firm disagg)	475701	0.000	0.000	0.000	0.000	0.000	0.000	0.620
DMCI	475701	0.130	0.090	-0.050	0.060	0.110	0.170	0.620
DSCI	475701	0.120	0.090	-0.030	0.050	0.080	0.160	0.620

Note: Table contains descriptive statistics for different panels, which include country-panel, decile-panel, industry-sector panel and firm level panel. The statistics include mean, standard deviation (S.D.), minimum, 25 percentile, medium, 75 percentile and maximum.