

Does Law Really Matter for Stock Market Development? The Case of Fiji, 1997–2007

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Abstract

In the context of the prominent law–finance–economic growth theory and the continuing debate over it, this paper examines the applicability of the law–stock market development nexus in Fiji, an island economy in the South Pacific region, where economic growth performance has generally been considered disappointing. Results from an analysis of primary and secondary data indicate that stock market development over the 1997–2007 period has been very weak compared with 55 other developed and developing countries. The evidence does not support the frequently stated or implied proposition that strengthening legal institutions is an essential pre-requisite for furthering stock market development in Fiji. This finding may have implications for other developing economies in the South Pacific and elsewhere.

Introduction

The increasing prominence of the law–finance–economic growth literature may have important policy implications for countries worldwide, especially those with poor or lacklustre growth performance records, such as the island states in the South Pacific. With other strategies having not yielded much success, some governments in this region may turn to legal institutions strengthening as a key to improving growth performance. The outcome of such a move would be of interest to not only the countries involved, but also multilateral organisations (e.g. the World

Bank, UNDP, IMF, and ADB) and governments of leading countries and regional powers (e.g. the US, UK, Japan, China and Australia).

In policy discussions around the region, it has often been suggested that strengthening legal institutions may be an essential pre-requisite for financial development and, through it, for stronger economic growth. The validity of this proposition depends on not only the connection between financial development and economic growth, but also the nexus between strengthening of legal institutions and financial development. But does the available evidence support the latter hypothesised relationship in the context of South Pacific island economies? Despite the contributions of the ADB (2001), Chand (2002), and others to this general area of knowledge, this particular question does not appear to have received much in-depth attention to date.

Stock markets represent a major component of the financial system in developed countries, but exist in only two of the South Pacific island economies – Fiji and Papua New Guinea. In Fiji, the stock market has operated for almost thirty years. It is timely and of interest, therefore, to examine the evidence regarding how strongly the law–finance nexus applies in the case of Fiji’s stock market.

In this paper we investigate whether legal institutions have historically facilitated or impeded the development of Fiji’s stock market, and how they could facilitate further development. To that end, we seek to address the following specific questions for Fiji:

- (i) how strong are the legal rules protecting shareholder rights?
- (ii) what is the quality of law enforcement?
- (iii) how well has the stock market developed?
- (iv) internationally, is there a relationship between legal institutions and stock market development? and
- (v) how important is the enhancement of legal institutions in promoting stock market development?

To our knowledge this is the first study to systematically assess the effects of legal protection for shareholders in Fiji. The results may be of relevance to the Pacific countries and possibly elsewhere.

We use secondary as well as primary data to investigate answers to the questions listed above. For instance, we use secondary cross–country data sourced from the La Porta et al. (1998; hereafter, LLSV) and Spamann (2006) studies to assess legal rules and the quality of law enforcement. In addition, we use primary data from a survey of both existing and potential shareholders to gain a better understanding of their views and attitudes. While legal protection of shareholders has emerged in the literature as a potentially important determinant of stock market

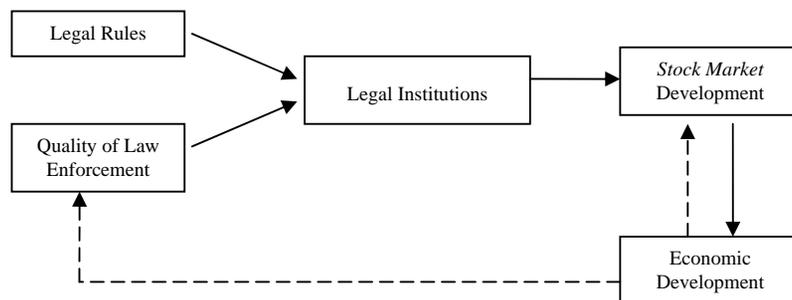
development, research to date has generally paid little attention to the views and opinions of the shareholders themselves.

We find shareholder rights to be relatively well protected. However, the stock market has not developed particularly well: while market capitalisation has increased over the years, trading activity has remained very low in comparison with other economies. It appears that the Fijian evidence does not provide much support for the hypothesised law–finance connection. In particular, the association between legal *rules* and stock market development in Fiji seems very tenuous indeed. In view of all this, it would be reasonable for governments in Fiji and similar developing countries to treat with caution, the claim that strengthening legal rules and institutions is a critical requirement for stock market development.

Outline of Conceptual Framework

Figure 1 illustrates the conceptual framework underlying the analysis in this paper. The main hypothesis being assessed here is the well-known argument that adequate legal protection of investors, in the form of both legal rules and law enforcement quality (together known as legal institutions), enhances the flow of funds from savers to users via formal financial channels (see the solid lines in the top part of the figure). For a small sample of the relevant literature, see Beck et al. (2003a, 2003b), Djankov et al. (2003), Johnson et al. (2000), La Porta et al. (1997, 1998, 1999a, 1999b, 2000), and Levine (1997). The above hypothesis is often linked with another (not tested here), namely that financial development facilitates or promotes broader economic development.

Figure 1: The hypothesised legal institutions–stock market development link



(Source: Sharma and Nguyen (2010), with minor amendments)

The broken lines in the lower part of Figure 1 illustrate an alternative view, which may be seen as either complementing or competing with the law–finance–growth view: the second view places emphasis on the positive influence that broad economic development may exert on financial development and on the enhancement of law enforcement quality. We remain open to both views in conducting the research reported herein.

The context for the analysis of these propositions is made more specific by focusing on *shareholders* as a subset of the class of investors, and on the *stock market* as a component of the broader financial system.

Legal Rules Concerning the Rights of Minority Shareholders in Fiji

Basic Approach

In measuring the legal rights of shareholders, we follow the approach adopted by La Porta et al (1998) in their seminal study on law and finance. Despite criticisms being directed at the study itself recently, the approach pioneered in that study remains a useful tool for cross–country comparative analysis of the law–financial development relationship. For completeness, it may be useful to present here a brief summary of the LLSV (1998) approach and dataset.

LLSV used six core variables to measure the degree to which national laws protect minority shareholders from company insiders (managers and controlling shareholders). These are: (i) PROXY = proxy voting is allowed by mail; (ii) BLOCK = controlling shareholders are able to block share transfers close to meeting dates; (iii) VOTE = there is cumulative voting/proportional representation of minorities on board of directors; (iv) OPP = there is legal protection against perceived oppression; (v) PRE = there are pre–emptive rights to new issues; and (vi) PERC = percentage of share capital needed to call an extraordinary shareholders’ meeting. Two non–core (or substitute) variables have also been suggested as relevant measures in situations where legal rules are weak: (a) ONE = one–share–one–vote practice; and (b) MAND = mandatory dividend.

A legal system is deemed to provide strong protection to minorities where PROXY, VOTE, and PRE are allowed; BLOCK is not allowed; PERC is less than or equal to the world median of 10; and OPP is in place. These rights are referred to as anti–director rights (ADR) in the literature. A composite index (ADRI) is then developed via aggregation to measure the overall level of shareholder protection:

$$ADRI = PROXY + BLOCK + VOTE + OPP + PRE + PERC \quad (i)$$

Each individual variable may take on a value of either 1 or 0, so that ADRI ranges from 0 to 6, with higher scores indicating stronger legal protection of minorities from insiders. In the case of the first five component variables, a score of 1 is assigned if the law favours minorities, 0 otherwise. In the case of the sixth component variable (PERC), a lower percentage is deemed to favour minorities; thus, a score of 1 is assigned if the required percentage is at or below the world median of 10 and 0 otherwise. As for the two remedial/substitute variables, a score of 1 is assigned if ONE is legislated; 0 otherwise, and MAND equals 1 if mandatory dividends are legislated; 0 otherwise. LLSV (1998) compiled information on the above variables for 49 countries across Europe, North and South America, Africa, Asia and Australasia for the year 1993. The main sources of data were the company and bankruptcy/reorganisation laws in the various countries.

Criticisms of the LLSV (1998) Approach and Dataset

The LLSV (1998) approach to measuring and comparing shareholder legal protection across countries, and their dataset have been used by numerous studies of law and finance, including, e.g., Dayha et al. (2008), Giannetti and Koskinen (2007) and Kalcheva and Lins (2007). In recent years, however, they have come under criticism for a number of reasons. These include: (i) the selection of the component variables may not have a strong theoretical basis; (ii) the binary (0, 1) scoring system ignores the possibility of the same rule being applied in different ways in different countries or over time; (iii) there was a lack of transparency and consistency in gathering, collating and coding data, aggravated by reliance on limited 'legislated' sources and non-involvement of legal experts (lawyers) in the process.

One of the critics, Spamann (2008), recommends continued use of the basic approach to measuring shareholder legal protection, but with a dataset -- Spamann (2006) -- that is considered more reliable for having addressed (iii) above. The Spamann (2006) dataset covers 46 of the 49 LLSV (1998) countries, and focuses on 1997 (rather than 1993) as the year for data collection. (Countries not included in the Spamann set are: Indonesia, Sri Lanka and Zimbabwe.)

Djankov et al (2008) also proposed revisions to the original ADRI as compiled by LLSV. In particular, they suggested revisions to the definitions of three of the six LLSV component variables, on the basis of what they saw as a stronger theoretical formulation. Unfortunately, data documentation on these is not publicly available. Djankov et. al. (2008)

further proposed a new index (ASDI; anti self dealing index) for similar, theory-based reasons. This new index also allows graduated values between zero and one for component variables. It is compiled from a different set of component variables measuring different aspects of shareholder protection, especially legal issues pertaining to a particular type of transaction: a mispriced asset value (Spamann, 2008). However, other important issues for shareholders, such as the issuance of new shares to associates of an insider at below-market prices, are not considered.

Another new index is the shareholder protection index (SPI) proposed by Armour et al. (2008). It shares with ASDI the advantages of being based on solid theoretical grounding, and allowing component variables to have graduated values rather than being restricted to zero or one. Its main disadvantages are that (a) there was little involvement of legal experts in the data assembling process, and (b) it covered fewer (only 20) countries than previously.

Assessing Shareholder Rights in Fiji

To investigate our first research question -- how strong are the legal rules protecting shareholder rights in Fiji? -- we follow the LLSV approach but rely on the Spamann (2006) dataset for data relating to countries other than Fiji. Data for Fiji was collected by the authors in 2006 from relevant legislations, including the Companies and Bankruptcy acts. Data collection also included in-depth interviews with academics at the University of the South Pacific who taught law courses that involve corporate, and other relevant investor protection, legislations. In response to the questions being asked, the respondents, who also had prior industry experience, made references to relevant legislations as well as precedence. Thus, the sources of data for Fiji included mandatory as well as default rules.

Results

In terms of formal legal rules, the level of protection of shareholders in Fiji is very high; see Table 1. The country's overall ADRI is 5.00, compared to the sample average of 3.51. Fiji's ADRI score is far higher than the average for countries classified by the World Bank as being in the 'lower middle income' group (ADRI = 3.00), or the 'upper middle income' group (ADRI = 3.38). (For ten of the eleven years studied, Fiji was classified as a member of the former group; in 2007 its status was changed to the latter.) Indeed, Fiji's score is higher than the average for

any of the groupings of countries considered, including those with 'English' legal origin (ADRI = 3.50), those with 'German' legal origin (ADRI = 4.17) and those belonging to the World Bank's 'high income' group (ADRI = 3.81).

Table 1: Assessing Minority Shareholder Legal Rights Using Secondary Data

Panel A: Fiji and other countries classified by legal origin

Legal Origin	Fiji	English	French	German	Scandinavian	Sample Ave.
PROXY	1	0.25	0.1	0.17	0	0.15
BLOCK	1	1	0.65	0.83	1	0.83
VOTE	1	0.13	0.3	0.33	0	0.22
OPP	1	1	0.9	1	1	0.96
PRE	0	0.69	0.95	0.83	1	0.85
PERC	1	0.88	0.5	1	1	0.74
ADRI	5	3.5	3.24	4.17	4	3.51
ONE	0	0.25	0.35	0.33	0	0.28
MAND	0	0	0.3	0	0	0.13

Panel B: Fiji and other countries by World-Bank income categories

Income	Fiji	Low Income	Lower Middle	Upper Middle	High Income
PROXY	1	0	0	0.25	0.19
BLOCK	1	1	1	0.63	0.81
VOTE	1	0.25	0.63	0.13	0.12
OPP	1	1	0.88	0.88	1
PRE	0	0.75	1	0.88	0.81
PERC	1	1	0.25	0.63	0.88
ADRI	5	3.2	3	3.38	3.81
ONE	0	0.75	0.38	0.25	0.19
MAND	0	0	0.25	0.38	0.04

Note: Figures reported for each of the various country groups and for the whole sample are unweighted averages of the corresponding figures for the member countries. (Source: Spamann (2006), except for Fiji, which are based on the present research. Spamann data are for 1997; Fiji data would not have changed since 1925).

Results from sensitivity analysis indicate that using LLSV rather than Spamann data does not alter the basic finding that minority shareholders in Fiji appear to be well protected by legal rules. However, it is worth noting the contrast between this finding and the result reported by Sharma and Nguyen (2010) -- namely that *creditors*, as distinct from shareholders, appear to enjoy less protection via legal rules in Fiji than in comparable or developed countries. Among the most important of such creditors are commercial banks, with substantial portfolios of loans.

Quality of Law Enforcement in Fiji

The quality of law enforcement in Fiji has been assessed previously by Sharma and Nguyen (2010). It suffices, therefore, to provide here only a brief summary of their methods and main findings. While alternative methodologies to LLSV (1998) have been suggested to measure the strength of legal rules protecting shareholders and corresponding datasets have been provided, the same does not appear to apply in the case of measuring the quality of law enforcement. Following LLSV (1998), five indicators of law enforcement quality were used: efficiency of the judicial system (EFJS), rule of law (RoL), corruption (COR), risk of expropriation (EXP) and the likelihood of repudiation by government (REP). The quality of accounting standards (ACT) was used as a substitute or proxy where law enforcement is weak. A composite index (EQI, or enforcement quality index) was compiled by taking the average of the scores across the five core individual aspects of law enforcement listed above (not including ACT).

Sharma and Nguyen utilised data obtained from an opinion survey conducted in 2006 to ascertain the views of investors, shareholders and others in Fiji. A total of 334 respondents participated. Responses were obtained on a scale of 1–10, with higher scores indicating better quality, e.g. 10 indicating perfect quality and 1, the worst quality level. Primary data obtained for Fiji were compared with secondary data provided by LLSV for 49 countries, classified by legal origin and World Bank's income categories as in Section 3 above; see Table 2, reproduced from Sharma and Nguyen (2010).

In terms of legal origin classification, it was observed that in almost all nominated aspects of law enforcement, Fiji received scores that were lower than the averages for the various groups and for the LLSV sample as a whole. Corruption (COR) was clearly an outlier, with by far the lowest mean score. By contrast, the mean score for the proxy variable, ACT, was relatively high (7.30), indicating that residents in Fiji were fairly sat-

ified with the country's accounting standards. Indeed, this score was higher than the average for the entire sample, as well as the averages of all groups except the Scandinavian-tradition group (7.40). In terms of income level classification, Fiji's composite (EQI) score of 5.10 was very close to the average score for the 'lower middle income' group (5.19) but substantially lower than the 'upper middle income' group (6.31).

Overall, it would appear that, while Fiji rates very highly in international comparisons of the strength of legal rules protecting shareholders (ADRI), it rates somewhat below average in comparisons of law enforcement quality (EQI).

Table 2: A comparison of perceptions regarding the quality of law enforcement in Fiji and other countries

Panel A. Fiji and LLSV countries classified by legal origin.

Legal Origin	Fiji	English	French	German	Scandinavian	Sample Ave.
EFJS	5.1	8.15	6.56	8.54	10	7.67
RoL	5.3	6.46	6.05	8.68	10	6.85
COR	3.6	7.06	5.84	8.03	10	6.9
EXP	6.2	7.91	7.46	9.45	9.66	8.05
REP	5.5	7.41	6.84	9.47	9.44	7.58
EQI	5.1	7.4	6.47	8.83	9.82	7.37
ACT	7.3	6.96	5.12	6.27	7.4	6.09

Panel B. Fiji & LLSV countries classified by income categories

Inc Group	Fiji	Low Income	Lower Middle	Upper Middle	High Income
EFJS	5.10	6.70	5.87	6.41	8.93
RoL	5.30	3.81	4.10	5.68	8.85
COR	3.60	4.17	4.58	5.91	8.62
EXP	6.20	6.06	6.49	7.00	9.36
REP	5.50	5.21	5.78	6.56	9.04
EQI	5.10	5.19	5.19	6.31	8.96
ACT	7.30	5.80	4.92	5.31	6.65

Note: Figures reported for each of the various groups and for the whole sample are unweighted averages of the corresponding figures for the member countries. (Source: LLSV (1998), except for Fiji, which are based on a survey conducted by the authors in 2006).

Stock Market Development in Fiji and other Countries, 1997–2007

Basic Approach and Data Sources

In assessing stock market development, we focus on two measures: (i) MCAPY (market capital to GDP), a size measure; and (ii) TRADE (total value traded to GDP), an activity/liquidity measure. While these ratios are commonly used in the literature for these purposes, our choice is also influenced to some extent by data availability. For each of these variables, an increase over time is interpreted as evidence of greater, or more advanced, development.

Fiji's performance with regard to these indicators is compared with the 49 countries in the LLSV (1998) sample. Given that Fiji is a small island developing state (SIDS) in the South Pacific region, a comparison with other SIDS in the region would have been useful. However, there is only one other SIDS in the region that also has a stock market -- Papua New Guinea (which is included in the analysis). To broaden the comparison, we include seven other SIDS, for which relevant stock market data are available. Thus, our comparisons involve up to 55 countries. (The other SIDS were Barbados, Trinidad and Tobago, Papua New Guinea, Guyana, Jamaica, Mauritius, and St. Kitts and Nevis.) Data on MCAPY and TRADE were obtained from the 'Financial Structure' dataset compiled by Beck et al (2008). While this dataset covers up to 175 countries globally over the 1960–2006 period, Fiji's data for the selected variables are available only for the period 1997–2007, thus restricting our analysis to this eleven-year period.

Size of Fiji's Stock Market in an International Context, 1997- 2007

As Table 3 shows, the relative *size* of Fiji's stock market, expressed as a percentage of GDP (MCAPY), has generally risen over the period 1997–2007. Interestingly, this expansion does not appear to have been severely disrupted by the 2000 *coup*; after the event, the market continued to expand in relative size for another five years. To some extent, the rise in MCAPY was a reflection of an increase in the number of firms listed on the exchange: whereas 9 firms had listed over the 1979–1998 period, the number had increased to 17 by 2005 (CMDA, 2007).

Fiji's performance has allowed the country to narrow the gap between itself and comparator countries to some extent. As shown in Table 3, Fiji's MCAPY was 4.14 in 1997' this was 11.2% of the average for all SIDS, or 12.76% of the average for all 'lower middle income' countries.

In 2007, it had increased to 17.05, which was 23.69 percent of the SIDS group’s average, or 22.61 percent of the lower middle income group’s.

Table 3: Market capitalisation: GDP, 1997-2007

	Fiji	SIDS	Low Income	Lower Middle	Upper Middle	High Income
1997	4.14	36.94	18.71	32.44	62.49	76.06
1998	5.49	50.68	16.07	29.34	52.35	85.53
1999	5.27	55.48	15.91	31.05	58.75	105.67
2000	10.63	49.66	15.36	28.82	63.04	118.1
2001	11.39	50.28	19.59	24.3	60.21	104.64
2002	13.75	61.83	21.56	24.67	64.21	84.12
2003	18.6	76.58	47.42	31.65	55.83	84.41
2004	18.95	82.94	34.95	41.79	61.51	102.67
2005	20.74	88.78	35.47	56.76	67.32	113.81
2006	19.53	82.14	97.55	66.27	74.53	119.72
2007	17.05	71.97	39.55	75.4	92.99	129.48

Nevertheless, as Figure 2 shows, Fiji’s MCAPY has remained far below that of most other SIDS. Indeed, within this group, Fiji’s stock market size relative to GDP remains one of the smallest, roughly equal to that of Guyana’s, and noticeably smaller than that of economies such as Barbados, Jamaica, or Trinidad and Tobago. Interestingly, Fiji’s MCAPY has been smaller than that of Papua New Guinea (PNG), the only other South Pacific SIDS with a stock market. Similarly, Fiji’s MCAPY has been among the lowest within the group of ‘lower middle’ income countries, and the gap may have increased since 2005.

Fiji’s Stock Market Activity in an International Context, 1997-2007

Assessing stock market development on the basis of measures of size can potentially result in misleading conclusions, as a stock market may be quite large in terms of capitalisation value but may be highly inactive or illiquid. Thus, trading activities, such as volume and frequency of trade, and liquidity may be more important than mere size (Levine and Zervos, 1998; LLSV, 1997). Accordingly, in this sub-section, we analyse data for TRADE (the ratio of total value of stocks traded to GDP). For Fiji, the Beck et al. (2007) dataset for this variable are incomplete, even

for the 1997–2007 period. We have inferred the missing values from comparable data provided by the Capital Market Development Authority and the Reserve Bank of Fiji, the country’s capital markets and financial institutions regulators, respectively.

Figure 2: Market Capitalisation to GDP trends in Fiji and other SIDS, 1997-2007

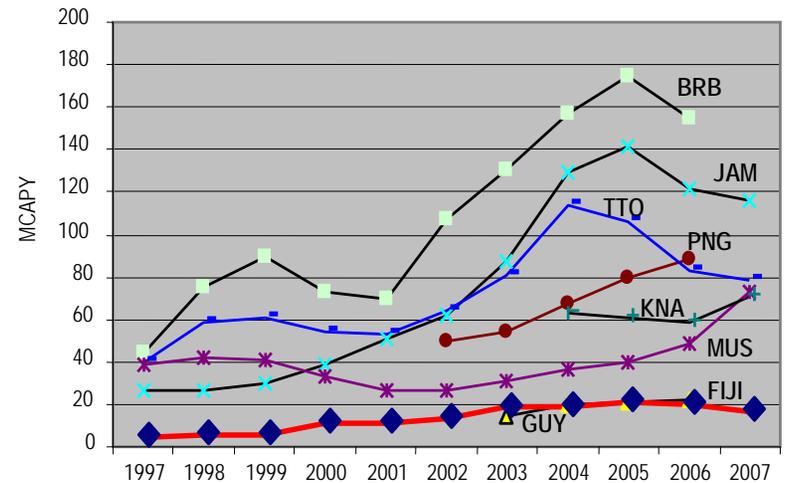


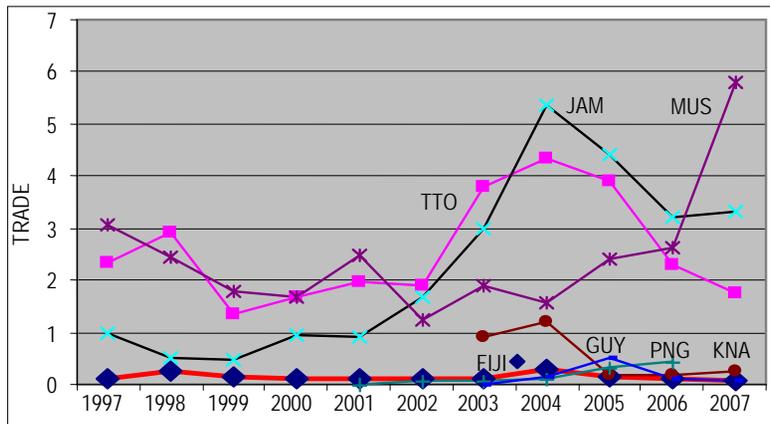
Table 4 shows a relatively flat TRADE series over time for Fiji, a pattern clearly at odds with the rising trend in MCAPY seen previously. Apart from a couple of high outlying observations (for 1998 and 2004) and one low outlier (for 2007), the observations tended to be within the 0.10–0.15 range, which is extremely low by international standards. Fiji’s TRADE was only 0.09 in 1997—about 4.83 percent of the average for the SIDS group (1.86), or 0.72 percent of the lower middle income group’s average (12.50). By 2007, TRADE had not changed much for Fiji, while it had increased substantially for each of the various country groupings: at 0.06, Fiji’s indicator was then only 2.67 percent of the SIDS group average (2.24) and 0.17 percent of the lower middle income group’s average (35.28). Thus, not only was trading activity in Fiji far lower than in comparable country groupings, it also continued to fall further in relative terms. Again, this contrasts sharply with the corresponding conclusion for MCAPY: in terms of this size indicator, Fiji was able to narrow at least the gap between itself and the group averages.

Table 4: Total value traded: GDP, Fiji & other countries, 1997-2007

	FIJI	SIDS	Low Income	Lower Middle	Upper Middle	High Income
1997	0.09	1.86	6.49	12.5	30.32	68.38
1998	0.24	1.83	4.66	10.49	17.47	71.37
1999	0.13	1.02	9.56	15.95	21.73	89.6
2000	0.12	1.14	12.42	16.95	30.91	112.68
2001	0.11	1.15	8.42	11.09	18.04	89.8
2002	0.11	7.73	12.27	10.85	19.8	83.23
2003	0.11	2.36	25.49	16.08	19.86	75.13
2004	0.29	2.98	20.68	19.77	23.59	87.39
2005	0.16	2.1	35.25	35.59	25.09	100.36
2006	0.1	5.58	31.41	34.17	31.06	124.45
2007	0.06	2.24	28.18	35.28	46.28	174.44

Figure 3 confirms the above findings and provides greater details regarding comparison between Fiji's TRADE and that of individual comparator countries. For instance, in 1997, trading activity in Mauritius (a SIDS) was 33 times more than in Fiji; by 2007, it had become 114 times more. More generally, the figure illustrates the fact that Fiji's TRADE value has been among the lowest in both the SIDS group and the lower middle income group.

Figure 3: Total Value Traded: GDP trends in Fiji and other SIDS, 1997-2007



Note: Barbados has been excluded due to its exceptionally high TRADE compared to other countries in the group.

Summary

Overall, the development of Fiji's stock market over the period 1997-2007 must be considered weak. It is true that the number of firms listed on the stock exchange almost doubled, and market capitalisation as a percentage of GDP (MCAPY) generally increased during this period. It is also true that the gaps between Fiji's MCAPY and that of other developing economies were reduced to some extent in proportional terms. Nevertheless, in absolute terms, Fiji's MCAPY remained far below the level in comparable countries either in the lower middle income group or the small island group. Moreover, it can be argued that analysis based on an alternative measure, namely the volume of trading activity as a percentage of GDP (TRADE), is more appropriate and meaningful. For Fiji, this measure has been extremely low over the entire period of analysis, and has shown no tendency to catch up with comparable countries. Indeed, in international comparisons of TRADE scores, Fiji often looks like a clear outlier. The country's weak performance in terms of stock market development contrasts noticeably with its performance in terms of banking sector development, in that the latter has been found previously to be rather strong (Sharma and Nguyen, 2010).

Legal Institutions and Stock Market Development: International Context

In this section, we re-examine possible relationships between legal institutions and stock market development in an international context. Previous findings that there was evidence in support of such relationships (e.g. LLSV, 1997) have been questioned by more recent studies, such as Armour et al. (2008) and Spamann (2008). In light of this continuing debate, it is of interest to revisit the law-stock market development question, especially with the use of a new and more recent set of data regarding stock market development (Beck et al., 2008) and with Fiji being included in the sample.

Existing Evidence Regarding the Law-Stock Market Development Nexus

In advancing empirical evidence for the law-finance nexus, LLSV (1997) find that in a sample of 49 countries, economies with better legal protection for investors tend to have broader and deeper capital markets: in cross-section regressions, there is a positive relationship between

ADRI (described in Section 3 above) and the size of stock markets. The latter is measured by three different variables, namely, MCAPY; NUMBER (number of domestic listed firms/population); and IPO (number of initial public offerings/population).

As discussed in Section 3, the data used by LLSV to measure the strength of legal rules protecting shareholders (ADRI) have been criticised on a number of grounds. In particular, Spamann (2006) has provided a new, 'corrected' ADRI dataset which addresses some of these criticisms, especially those relating to the (lack of) involvement of legal experts in the data compilation process. For convenience, in what follows we will refer to the original dataset provided by LLSV (1998) as ADRI_L and to the new dataset provided by Spamann as ADRI_S. When Spamann replicates the LLSV (1997) analysis, using the new ADRI_S rather than the old ADRI_L dataset, he finds that ADRI_S does not have a significant influence over stock market development. This result suggests that the findings of numerous cross-country empirical studies in the literature that have relied on the use of ADRI_L as a measure of legal shareholder protection may be questionable.

Similarly, Armour et al. (2008) find no significant positive relationship between law and stock market development. Their sample covers 20 countries, of which 17 are also in LLSV's sample of 49. Shareholder protection is measured using a broader (10) set of variables, each of which can take intermediate values between 0 and 1 and these values may reflect changes over time. Their composite index (SPI) is an aggregate of the 10 scores. Four indicators are used to measure stock market development: MCAPY, TRADE, TURN (TRADE/MCAPY), and NUMBER. The authors use panel regressions covering the 1995–2005 period. A possible shortcoming of the SPI dataset is that legal experts were not involved in its construction.

Contrary to Spamann (2008) and Armour et al. (2008), Djankov et al. (2008) find new evidence to support the hypothesised law–stock market development nexus. The latter propose two measures of legal protection for shareholders. The first is a revised version of the original ADRI_L: at least three of the six variables appear to have been changed significantly. For convenience we will refer to this revised index as ADRI_D. The second proposed measure is a new index, called ASDI (anti-self-dealing index); Djankov et al. argue that this index is more firmly based in theory than the ADRI concept. The ASDI is constructed for the year 2003 on the basis of 10 components, with the sample covering 72 countries (not including Fiji). Djankov et al. use five indicators to measure stock market development: average MCAPY for the 1999–2003

period; premium paid for control in corporate control transactions; average NUMBER for 1999–2003; average IPOs/GDP for 1996–2000; and ownership concentration among the largest firms. There is some difficulty in extending the Djankov et al. datasets (for either ADRI_D or ASDI) to cover additional countries such as Fiji, because the available documentation regarding data construction does not provide sufficient details.

Legal Institutions and Stock Market Development Revisited

Earlier we examined the legal *rules* protecting shareholders in Fiji and other countries (Table 1). Our preferred measure of the strength of these rules is the new ADRI_S index proposed by Spamann (2006), although for robustness checks we also use the original ADRI_L index developed by LLSV (1998) in some parts of our analysis. We follow the approaches described by Spamann and LLSV, respectively, to construct corresponding values for Fiji to be added to the ADRI_S and ADRI_L datasets.

We also assessed the level and history of development in the stock market in Fiji and other countries (Tables 3 and 4). We used two variables to measure stock market development: MCAPY and TRADE, the latter being our preferred measure. The data for these variables come from Beck et al. (2007). Below, where the analysis focuses on a single year, we preferred to use data for the year 2002, both because it fell in the middle of our study period (1997–2007) and because it was a year for which data was available for more countries and more variables of interest.

As discussed, legal institutions include not only formal legal rules but also the quality of law enforcement. Indeed, 'in principle, a strong system of legal enforcement could substitute for weak rules since active and well-functioning courts can step in and rescue investors abused by the management.' (LLSV, 1998: 1131). Yet in the literature regarding the law–stock market nexus, as distinct from the law–banking sector development literature, the possible role of enforcement quality has often been neglected (see, for example, some of the studies discussed in the preceding sub-section). We also examine the perceived quality of law enforcement in Fiji and other countries (Table 2). The overall enforcement quality is represented by EQI, an index proposed by LLSV (1998). An alternative measure, which can be seen as a proxy for enforcement quality where such quality is low, is the standard of accounting practice (ACT). LLSV compiled data for EQI and ACT for around 49 countries. Corresponding data for Fiji were compiled by the present authors on the basis

of an opinion survey conducted in 2006.

Earlier, an alternative view to the law-finance-growth view was mentioned, namely one in which the causality direction is seen as running predominantly from broad economic development to financial development and legal institutions, rather than in the reverse direction. To accommodate this view, we use World Penn Table data for real GDP per capita (YPC) based on purchasing power parities (PPP) as an indicator of economic development (http://pwt.econ.upenn.edu/php_site/pwt_index.php). To capture lagged effects, YPC is lagged 10 years.

Table 5 shows simple correlation coefficients between the variables of interest. It can be seen that the original LLSV index of legal rules strength (ADRI_L) is positively correlated with the *size* measure of stock market development (MCAPY): the correlation coefficient is 0.41 if MCAPY is measured in 2002. However, ADRI_L is not strongly correlated with the *activity/liquidity* measure of stock market development (TRADE): the coefficient is 0.18 if TRADE is measured in 2002. Further, the new index ADRI_S is not positively correlated with either MCAPY or TRADE: for 2002 the coefficients are -0.05 and -0.06, respectively. The table also shows that EQI is positively correlated with both measures of stock market development: the correlation coefficients are 0.41 and 0.47 for MCAPY and TRADE, respectively, as measured for 2002. It is worth noting that ACT and lagged YPC (e.g., values of YPC for 1992 or 1997) are also positively correlated with both MCAPY and TRADE.

Table 5: Simple correlation coefficients between the stock market development and various variables of interest

	YPC 92	YPC 97	MCA PY02	TRAD E02	MCAP Y07	TRAD E07	ADRI _L	ADR _S	EQI	ACT
YPC92	1.00	0.99	0.47	0.51	0.39	0.61	0.01	-0.21	0.92	0.48
YPC97	0.99	1.00	0.48	0.52	0.40	0.63	0.07	-0.19	0.93	0.51
MCAPY02	0.47	0.48	1.00	0.60	0.88	0.77	0.41	-0.05	0.41	0.39
TRADE02	0.51	0.52	0.60	1.00	0.57	0.89	0.18	-0.06	0.47	0.43
MCAPY07	0.39	0.40	0.88	0.57	1.00	0.77	0.41	0.08	0.34	0.35
TRADE07	0.61	0.63	0.77	0.89	0.77	1.00	0.29	0.00	0.57	0.50
ADRI_L	0.01	0.07	0.41	0.18	0.41	0.29	1.00	0.42	0.07	0.30
ADRI_S	-0.21	-0.19	-0.05	-0.06	0.08	0.00	0.42	1.00	-0.06	0.13
EQI	0.92	0.93	0.41	0.47	0.34	0.57	0.07	-0.06	1.00	0.55
ACT	0.48	0.51	0.39	0.43	0.35	0.50	0.30	0.13	0.55	1.00

We conducted a more formal analysis of these relationships with the use of cross-section regressions; a summary of the results are presented in Table 6. The dependent variables are the stock market development measures for the year 2002, represented by MCAPY02 and TRADE02. The regressors include: (a) legal rules strength, represented by ADRI_L or ADRI_S; (b) quality of law enforcement, represented by EQI and/or ACT; and (c) economic development, represented by lagged YPC, e.g., YPC92.

Table 6: Stock market development regressions

	LLSV 1997	SN 2010				
Depdt variable	94MCAPY		02MCAPY		02TRADE	
Indept. variables						
70-93 GDP Growth	0.06*	92YPC	0.01*	0.01*	0.01*	0.01*
	(0.02)		(2.25)	(2.00)	(2.01)	(1.96)
94Log GNP	-0.01					
	(0.03)					
82-95Rule	0.04	EQI	-6.64	-6.01	-4.65	-6.01
	(0.02)		(-0.69)	(-0.54)	(-0.42)	(-0.49)
ADRI_L	0.12**	ADRI_L	16.05**		9.07 [#]	
	(0.04)		(3.14)		(1.54)	
		ADRI_S		6.69		5.77
				(1.05)		(0.80)
Constant	-0.24	Constant	0.29	18.87	-7.43	6.76
	(0.28)		(0.01)	(0.37)	(-0.14)	(0.12)
<u>Regression statistics</u>						
No. of Observations	45		50	49	49	49
R-squared			0.41	0.31	0.35	0.31
Adjusted R-squared	0.29		0.38	0.26	0.31	0.26
S.E. of regression			45.63	50.06	52.24	54.36
Mean depend. vari			62.33	62.50	50.61	52.52
F-statistic			10.81	6.71	8.08	6.50

Note: standard errors (for LLSV) and t-statistics (for SN) in brackets; ** significant at 1%; * significant at 5%; [#] significant at 10%

By way of comparison, LLSV (1997) use (a) ADRI_L for legal rules; (b) 'rule of law', which is a component of EQI, as a proxy for law enforcement; and (c) lagged GDP growth as well as contemporaneous

GNP as proxies for economic development. For reference, columns one and two in Table 6 show the results of the LLSV (1997) study. These suggest that legal rules (ADRI_L) and economic development (lagged GDP growth) exert positive influences on stock market development as measured by MCAPY in 1994.

The remaining columns in the table, with the heading 'SN 2010', show results from the current study for MCAPY and TRADE in 2002. As can be seen, lagged YPC appears to have a strong influence on stock market development, even in the presence of ADRI and EQI. In fact, dropping YPC from the model (not shown here) would reduce its explanatory power substantially: adjusted R-squared would be typically around 0.20 then.

As for the variables representing legal institutions, ADRI_L appears to have a significant and positive influence on both MCAPY and TRADE (measured for 2002). This is consistent with LLSV (1997) findings. However, the impact of ADRI_L is far stronger on the former than on the latter. Further, when the newer (and arguably better) indicator ADRI_S is used instead, it is found to have a non-significant impact on either of these dependent variables.

Both EQI and ACT turn out to have non-significant coefficients.¹ It is possible that investors in the equity market are generally influenced to a smaller extent by the quality of law enforcement or accounting standards than what banks and other holders of debt are. If so, that might be due to the rules, conventions and practices of stock markets being more standardised than is the case for loan arrangements, and to the fact that typically there are far fewer companies seeking funds on the stock market than there are businesses and individuals seeking loans. It is also quite plausible that the non-significance of EQI and ACT may be due to the multi-colinearity involving them and other explanatory variables, especially YPC.

In summary, our results suggest that when the strength of legal rules is measured appropriately (e.g., by ADRI_S) it does not appear to exert a significant influence on stock market development. The quality of law enforcement, either measured directly by EQI or proxied by ACT, also appears to have a non-significant impact, although this finding could be a statistical artefact of correlations between explanatory variables. The variable which is found consistently to have strong explanatory power in the various formulations turns out to be lagged YPC, suggesting that causality may run from economic development to stock market development.

¹ For results including ACT, see appendix A.

Legal Institutions and Stock Market Development in Fiji

Taking Stock of Findings

The situation in Fiji as analysed above can be summarised as follows: the country has very strong legal *rules* protecting shareholders (ADRI_S = 5 out of a possible score of 6), average law *enforcement* quality (EQI = 5.10 out of 10) and high accounting standards (ACT = 7.30 out of 10), but very weak stock market development, especially when the latter is measured in terms of trading activity (TRADE = 0.11 in 2002, compared with 10.85 for lower middle income countries). Taken together, these stylised facts suggest that legal institutions have not played a major role in stock market development in Fiji.

This conclusion is consistent with cross-country findings by Spamann (2008), Armour et al. (2008), and our own regression results (as presented above). These regression analyses show that updated measures of strength of legal rules exhibit no significant, positive association with either MCAPY or TRADE. It is important to note, however, that Djankov et al. (2008) arrive at an opposite conclusion; their regressions show a positive influence on stock market development for both a revised version of ADRI and a newly proposed index (ASDI). As for law enforcement quality, regression analyses by various authors have generally found no significant role for it in determining stock market development.

Awareness Regarding Shareholder Rights in Fiji

As a means to augment the available information about the importance of legal rules protecting shareholders in Fiji, we conducted an opinion survey of 230 respondents in 2006; Appendix B provides the details on the sample. The survey was intended to reflect the views of existing as well as potential shareholders, whom we see as being at the centre of the debate: whether legal rules matter or not depends on whether these current and potential investors find them to be important in their own decision-making processes.

It is understandable that when people are asked about the importance of any particular right, they may say that it is important to them even if they do not fully understand the right itself or know much about it. In that context, the affirmative answer is simply a precaution – for many people, it would always be better to have more rather than less protection, and more rather than fewer rights. Therefore, a more rigorous and accurate indication of the respondents' true views regarding the importance of

the rights may well be the extent to which they are aware of and understand these rights. With this in mind, respondents were asked if they were protected legally with respect to the rules PROXY, VOTE, PRE, BLOCK, PERC, and OPP. A score of 1 was assigned for a correct response and 0 for an incorrect or 'don't know' response. For example, since PROXY may be exercised by a shareholder in Fiji, a score of one was assigned if the response was 'yes'; zero if otherwise.

The aggregate awareness score for each respondent ranged from 0 to 6, where an aggregate score of six would indicate that the relevant respondent was well informed with respect to the rules protecting his/her rights. This would then be interpreted as an indication that legal protection is important to the respondent. On the other hand, an aggregate score of zero would indicate that the respondent was not aware of, or not well informed about, these rules – by implication, the respondent probably did not care a great deal about the rules. The scores for all respondents were averaged (unweighted) to yield the overall awareness level with respect to each rule.

Table 7 shows the distribution of the 230 respondents according to their level of awareness of legal rules protecting shareholders, expressed in terms of the six ADRI component variables.

Table 7: Shareholder Awareness of Legal Rights: Distribution of existing and potential shareholders with respect to awareness of rights (%)

Awareness level	Current Shareholders	Potential Shareholders	All Respondents
0	14.90	34.40	30.40
1	31.90	27.30	28.30
2	34.00	22.40	24.80
3	12.80	10.40	10.90
4	6.40	5.50	5.70
Total	100%	100%	100%

Awareness level	Current Shareholders	Potential Shareholders	All Respondents
Mean	1.60	1.30	1.30
Std Deviation	1.10	1.20	1.20
Minimum	1.00	1.00	1.00
Maximum	4.00	4.00	4.00
Median	2.00	1.00	1.00

None of the respondents were adequately informed with respect to *all six* legal rules (i.e., the maximum score of six was not recorded for any respondent). Indeed, no respondent attained a score of five either. Only 5.70 percent received a score of 4, and only 10.90 percent of the respondents received a score of 3; this suggests that even these moderate levels of awareness would be rare among Fiji's investing public. Nearly one-third of the respondents (30.40 percent) were totally unaware of the rules (score of zero), and more than half (53.10 percent) scored only 1 or 2 out of a possible 6. The mean overall score was 1.30, and the median was 1.00. The scores for existing shareholders (mean = 1.60, median = 2.00) were only slightly higher than for potential shareholders (mean = 1.30, median = 1.00). None of the respondents were adequately informed with respect to *all six* legal rules (i.e., the maximum score of six was not recorded for any respondent). Indeed, no respondent attained a score of five either. Only 5.70 percent received a score of 4, and only 10.90 percent of the respondents received a score of 3; this suggests that even these moderate levels of awareness would be rare among Fiji's investing public. Nearly one-third of the respondents (30.40 percent) were totally unaware of the rules (score of zero), and more than half (53.10 percent) scored only 1 or 2 out of a possible 6. The mean overall score was 1.30, and the median was 1.00. The scores for existing shareholders (mean = 1.60, median = 2.00) were only slightly higher than for potential shareholders (mean = 1.30, median = 1.00).

The survey results suggest that although shareholders in Fiji enjoy strong legal protection, both existing and potential shareholders do not have very good knowledge of what these protective measures are. Further, they suggest that from the perspective of shareholders, formal legal rules may be of relatively little importance in their decision to participate in the stock market.

Further Discussion

Despite its strong legal rules protecting shareholders, Fiji's stock market development is *unusually weak* in comparison with countries of similar income levels, especially when stock market development is measured in terms of trading activity. Sharma and Nguyen (2010) found that the country's banking sector development has been rather *stronger* than might be expected. It would seem plausible, therefore, that there may be certain characteristics of Fiji's economy and society that lie outside the scope of the present analysis but do tend to predispose participants in the formal financial system towards debt rather than equity instruments.

For example, if businesses in Fiji tend to have a preference for limited financial disclosure or for limiting stock participation to a small range of shareholders (e.g., relatives and close business associates), or if there is a strong traditional preference for relying on long-standing relationships in conducting business, such preferences would manifest themselves as a bias towards the banking sector as opposed to the stock market, in terms of the country's overall formal financial development. At this stage, however, conjectures such as these must be left to future research.

Conclusion

In view of the prominence of the law–finance–growth literature, and the rather disappointing economic growth performance of South Pacific island states as a group, this paper examined the applicability of the law–stock market development connection for Fiji. In this context, ‘law’ encompasses legal rules protecting the rights of shareholders as well as the quality of mechanisms and means to enforce law in general.

The main findings are as follows. By international standards, shareholders in Fiji are well protected legally - Fiji's score for strength of legal rules is far higher than that of comparable countries. By contrast, the quality of law enforcement is about average, although accounting standards are relatively high. Despite such relatively favourable conditions in terms of legal institutions, the level of stock market development in the country has remained very low, especially when it is measured in terms of trading activity.

After a brief review of the literature regarding the law–stock market development link in an international context, we offer some additional evidences based on recent data for stock market development variables (Beck, 2008) and incorporating data for Fiji. Our results tend to support the finding by some recent studies, such as Spamann (2008) and Armour et al. (2008), that when the legal rules' strength variable is measured appropriately, it shows no association with the level of stock market development. Although Djankov et al. (2008) in a notable dissenting study finds exactly the opposite, the weight of the evidence at this stage is against the hypothesis that strengthening legal rules is essential to stronger stock market development. The available evidence is similarly unresponsive of a hypothesised major role for law enforcement quality. On the other hand, the role of economic development, as measured by lagged income per capita, appears quite robust to alternative formulations and model specifications.

Our analysis of data for Fiji as well as other countries suggests that legal institutions have not had a major influence over the level of stock market development in the country. This finding is consistent with the results of a survey of existing and potential shareholders in Fiji. The level of awareness among these individuals regarding the legal rules established to protect their interests is very low, suggesting that the existence or absence of these rules may not matter a great deal to them.

In summary, the findings from our analysis do not support the hypothesis that stronger legal institutions are a critical pre-requisite for furthering stock market development. Law may not matter all that much for stock market development in Fiji. The same conclusion might also apply to other developing economies in the South Pacific and elsewhere, but this will need to be tested with appropriate additional data. For now, a follow-up question arises naturally: ‘what *does* matter for stock market development in Fiji, then?’ In future research, it may be useful to widen the scope of the enquiry to encompass the role of factors such as cultural preferences and traditions, or social institutions and arrangements, in addressing this important question.

Appendix A:**Regression analysis of the stock market development, with accounting standards (ACT) replacing enforcement quality (EQI)**

(This table should be read in conjunction with table 6 and the related discussion in section 6.2)

SN 2009				
Dept variable	02MCAPY		02TRADE	
Indept. variables				
92YPC	0.00*	0.00*	0.00*	0.00*
	(2.90)	(2.19)	(2.63)	(2.38)
ACT	4.48	11.66	10.33	13.18
	(0.65)	(1.05)	(1.01)	(1.05)
ADRI_L	17.52*		6.17	
	(2.86)		(0.85)	
ADRI_S		1.67		-0.29
		(0.17)		(-0.03)
Constant	-56.54	-47.79	-73.38	-68.48
	(-1.06)	(-1.07)	(-1.03)	(-1.28)
Regression statistics				
No. of Observations	42	42	41	41
R-squared	0.42	0.29	0.33	0.31
Adjusted R-squared	0.37	0.23	0.27	0.26

Notes: t-statistics in brackets; * significant at 5%

Appendix B:**Profile of current and potential shareholders interviewed for the opinion survey in 2006**

Variable	Current Shareholders	Potential Shareholders	All Respondents
Age			
Less than 20 yrs	0.00	4.90	3.90
20 to 40 yrs	89.30	83.70	84.80
More than 40	10.70	11.40	11.30
Gender			
Male (%)	68.10	67.80	67.80
Female	31.90	32.20	32.20
Education			
Secondary	6.40	7.70	7.40
Tertiary	93.60	92.30	92.60
Occupation			
Academic	14.90	20.20	19.10
Financial service industry	21.30	20.80	20.90
Public servant	31.90	16.90	20.00
Professional firm	12.80	16.40	15.70
Other (incl. private sector)	19.10	25.70	24.30
Shareholder status			
Current shareholder			20.40
Potential shareholder			79.60
Number of respondents	47	183	230

Source: Based on survey conducted by authors in 2006.

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