



ELSEVIER

Contents lists available at SciVerse ScienceDirect

# Journal of International Financial Markets, Institutions & Money

journal homepage: [www.elsevier.com/locate/intfin](http://www.elsevier.com/locate/intfin)



## Substitution or complementary effects between banking and stock markets: Evidence from financial openness in Taiwan

Su-Yin Cheng<sup>1</sup>

Department of Banking and Finance, Kainan University, 33857, No. 1 Kainan Rd., Luzhu Shiang, Taoyuan, Taiwan, ROC

### ARTICLE INFO

#### Article history:

Received 1 July 2011

Accepted 30 January 2012

Available online 7 February 2012

#### JEL classification:

C32

F30

G21

G28

O16

O40

#### Keywords:

Financial openness

Financial development

Stock markets

Economic growth

Bond markets

Cointegration

### ABSTRACT

This study uses quarterly data from 1973 to 2007 to investigate the influence of financial institutions on economic growth in Taiwan. We find that the breakpoint obtained by Gregory and Hansen (1996) appears in the third quarter of 1982, which coincides with the period of financial openness. In addition, the substitution effect between credit and equity markets is improved following financial openness. The negative impact of volatility on real output before financial openness turned positive after financial openness, suggesting that appropriate volatility enhances Taiwan's economic growth under the circumstance of more matured stock market following financial openness. However, the beneficial influence of liquidity on real output before financial openness turned negative afterward, suggesting openness generated the undesirable side effect of excess liquidity that impeded economic growth. Our long-run results are essentially the same even if we take the role of the private bond market into account.

© 2012 Elsevier B.V. All rights reserved.

### 1. Introduction

The literature of finance and economic growth frequently investigates associations between banking and growth (e.g., King and Levine, 1993; Levine et al., 2000; Beck et al., 2000; Christopoulos and

E-mail address: [s2864121@mail.knu.edu.tw](mailto:s2864121@mail.knu.edu.tw)

<sup>1</sup> Tel.: +886 3 3412500x7912; fax: +886 3 3412228.

Tsionas, 2004; Loayza and Ranciere, 2006). Numerous studies also examine relationships between stock markets and economic growth (e.g., Atje and Jovanovic, 1993; Harris, 1997; Levine and Zervos, 1998; Arestis et al., 2001; Beck and Levine, 2004; Hondroyannis et al., 2005; Wu et al., 2010; Cheng et al., 2011). However, investigations of the finance–growth nexus generally ignore relationships between credit and equity markets.

The post-2007 financial crisis reveals the importance of interactions between credit and equity markets on economic activity. Securitization<sup>2</sup> is said to improve efficiency and liquidity of credit markets, but it lets banks off-load default risk in capital markets. In effect, this interaction deepens adverse selection and moral hazard in loan markets, and strengthens the connection of banks industry and capital markets.<sup>3</sup> The recent financial crisis point out the importance of the interaction between credit and equity markets on economic activities. Therefore, models that investigate the influence of financial institutions on economic growth must include both markets.

Except for the actual operation of credit and equity markets, Arestis et al. (2001) indicate that economic growth may be influenced by interaction between credit and equity markets. However, the extent of that influence depends on whether credit and equity markets are substitutes or complements, and the literature is ambiguous on that point. Arestis et al. (2001) indicate that firms reduce their needs for bank borrowing when they issue equity, suggesting that the two markets are substitutes. They argue that if credit markets are better positioned than equity markets to monitor agency problems, then expanding equity markets at the expense of credit markets may impede economic growth. Arestis et al. (2001) also suggest that rising stock market capitalization may augment banks' non-lending businesses such as underwriting.<sup>4</sup> If so, financial intermediation swells with stock markets as both simultaneously promote economic growth. Accordingly, a complete picture of the finance–growth nexus must feature the relationship between banking and stock markets.

Generally, financial openness or liberalization can expand business volumes and enhance efficiency in the equity market and the banking system. The melioration in bank development allows banks to attract borrowers to finance through efficient services, which may lead to the substitutive relationship between the equity market and the banking sector. While a healthier and more liquid equity market can attract borrowers to finance from the equity market, this also benefits the banks' underwriting business, which may lead to the substitutive or complementary relationship between the two markets. Deidda (2006) indicates that premature financial development offering advice financial liberalization in lower income countries may hurt their economies. Liu and Hsu (2006) indicate that Taiwan's economy did not seriously suffer from the Asian financial crisis of 1997–1998 owing to conservative financial liberalization. Accordingly, financial openness increases the uncertain relationships between banks and equity markets, which then ambiguously impacts economic growth. Therefore, the interaction between the banking and equity markets should consider a complete picture of the finance–growth nexus, especially in economies with ongoing financial openness processes.

Previous time-series literature generally disregards the potential for structural breaks (e.g., liberalization of financial systems) that may shift long-run relationships (e.g., see Arestis and Demetriades, 1997; Xu, 2000; Chang and Caudill, 2005; Hondroyannis et al., 2005).<sup>5</sup> The likelihood of regime shifts

---

<sup>2</sup> Securitization is a structured finance process of pooling and repacking individual assets into securities. These securitized derivatives are sold to investors worldwide.

<sup>3</sup> When securitized sub-prime mortgages defaulted, investors holding Mortgage-Backed Securities (MBSs) or Collateralized Debt Obligation (CDOs) that contained them suffered significant losses. Investors (lenders) worldwide sought to take back their money due to the lack of confidence, but investment banks had fewer deposits because the financial institutions who involved themselves in MBSs or CDOs faced massive asset write-down. Ultimately, financial institutions melted down and investors redeemed from various mutual funds, which produced significant global equity market declines.

<sup>4</sup> To float an initial public offering (IPO) or seasoned equity offering (SEO), firms should be vouched for and underwritten by financial intermediaries, which strengthen the complementary linkage between these two markets.

<sup>5</sup> Arestis and Demetriades (1997) apply the Johansen cointegration test to examine the association between financial development and economic growth, focusing on Germany, the United States, and South Korea. Xu (2000) utilizes vector autoregressive methodology to investigate the linkage among financial development, investment, and economic growth in developing countries. Chang and Caudill (2005) examine the leading role of financial development in the process of economic growth in Taiwan. Hondroyannis et al. (2005) examine the relationship among the banking sector, equity market, and economic development in Greece.

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات