

China inside out: explaining silver flows (or the multilateral payments system) in the UK -Asia triangular trade 1820s-1870s

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Method of **silver-points** analysis

Silver points method (similar to bullion points)

Adapted from ‘Bullion points’ used for both gold and silver market prices compose a parity (Flandreau 2004, pp. 57-61; Nogues-Marco 2013), applied to silver bullion, specie and exchange.

Equation of Silver ***bullion*** points between London and Hong Kong

$$(1 - c_s^{HL}) \frac{p_s^L}{p_s^H} \leq X_L^H \leq (1 + c_s^{LH}) \frac{p_s^L}{p_s^H}$$

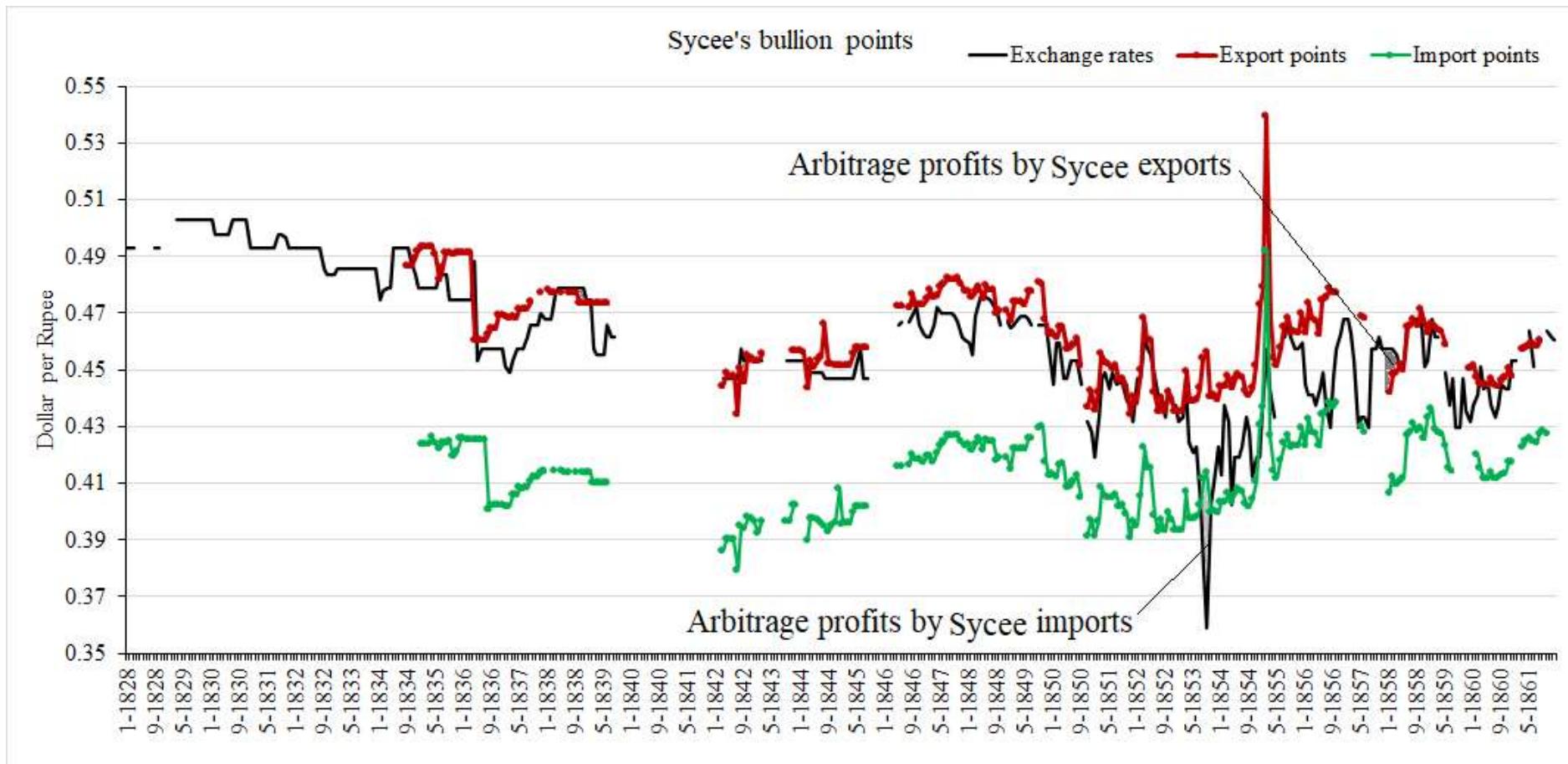
Advantage: method points reveals the adjustment mechanism for both the exchange rate system and international bullion market.

Applied to settlements among London and Indian and Chinese cities over 1828-1870.

Using the original quotes of silver prices in each city’s market

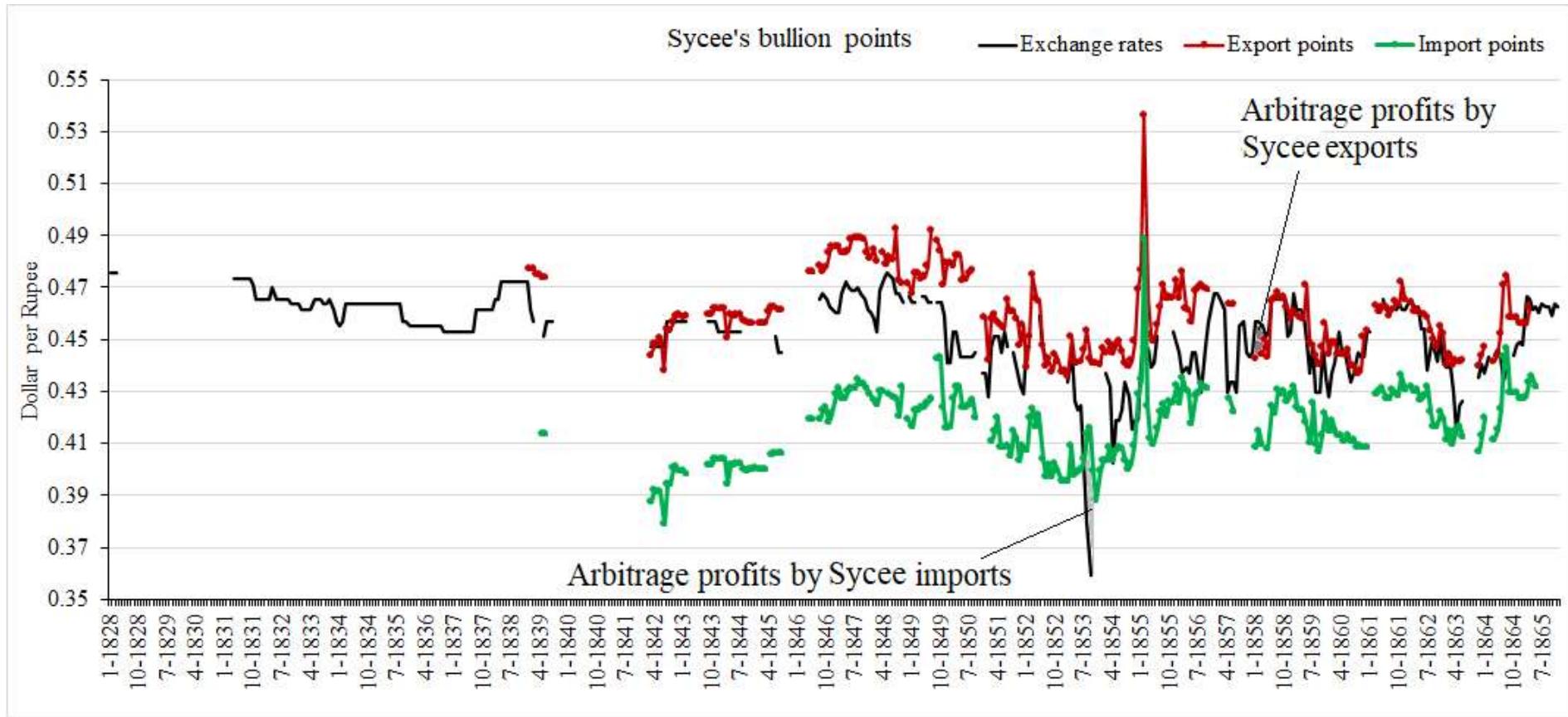
Silver Points in Canton/Hong Kong with Indian cities

Canton(-1845)/Hong Kong's silver points in Sycee with Calcutta, Jan. 1828-Dec. 1861
 (Dollar per Rupee: before May. 1836 Sicca, afterwards EIC Rupee)



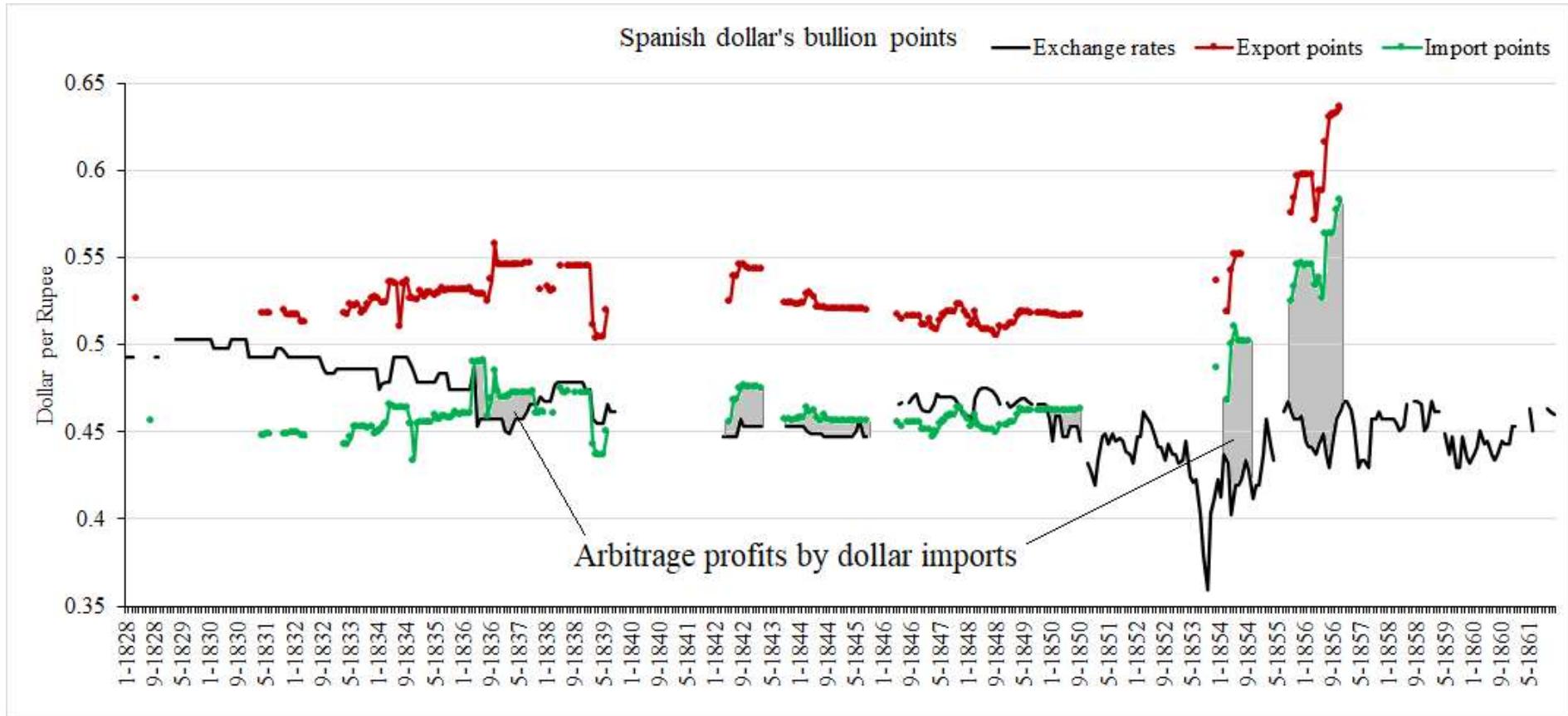
Ex. rates were moving along Sycee's export points, suggesting Sycee was likely to be exported from Canton/HK to Calcutta. Meanwhile, the rates did not exceed largely over the export points, seem to be regulated by the upper bounds, which indicates bills of exchange was also used for the settlement.

Canton(-1845)/Hong Kong's silver points in Sycee with Bombay, Jan. 1828-Dec. 1865
 (Dollar per Rupee: before Sep. 1835 Bombay, afterwards EIC Rupee)



Likewise, sycee was likely to be sent from Canton/HK to Bombay while bills of exchange were also efficient means of remittance because the equilibrium exchange rates held.

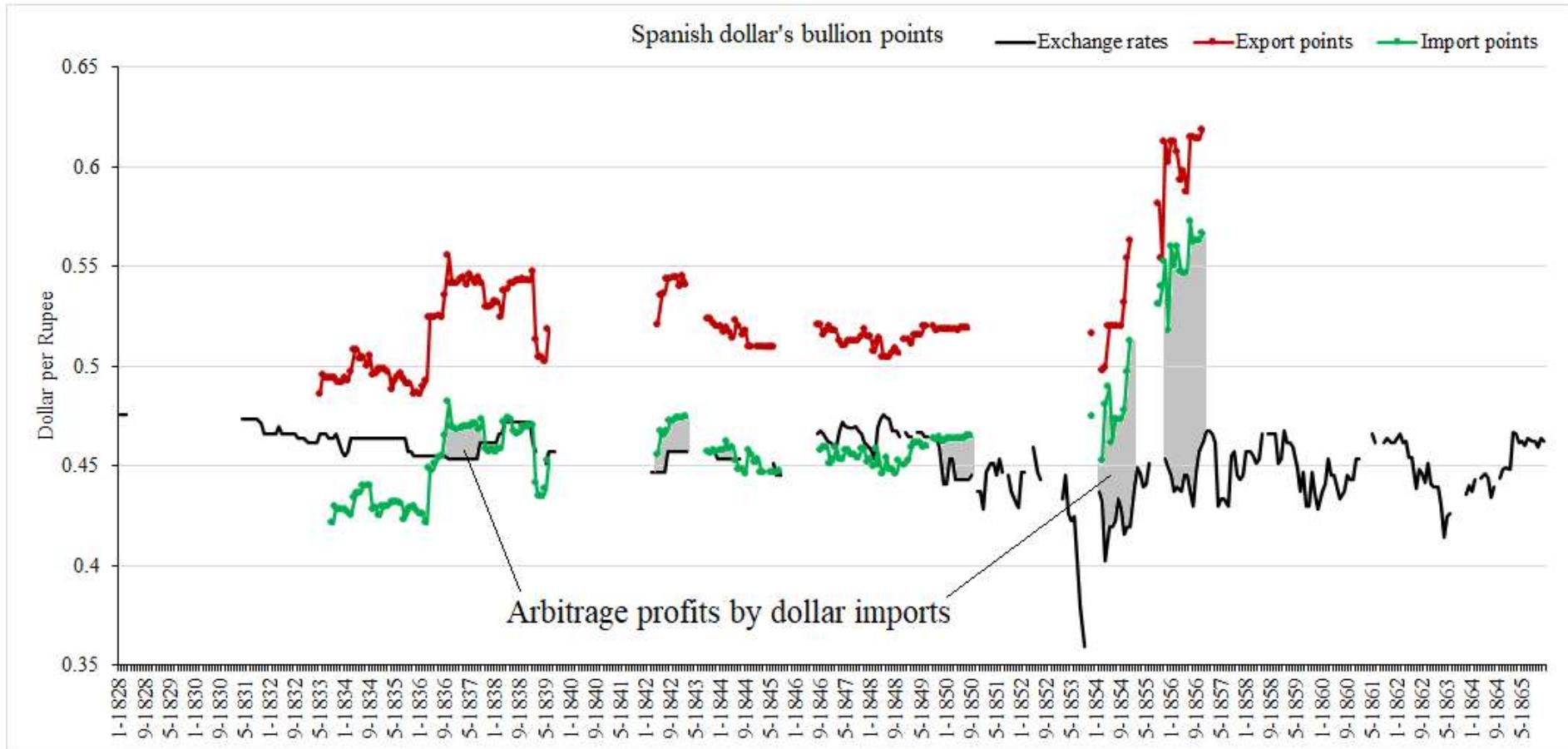
Canton(-1845)/Hong Kong's silver points in Spanish Dollar with Calcutta, Jan. 1828-Dec. 1861 (Dollar per Rupee: before May. 1836 Sicca, afterwards EIC Rupee)



Before 1836, there was no arbitrage profit by trading Spanish dollar between Canton and Calcutta.

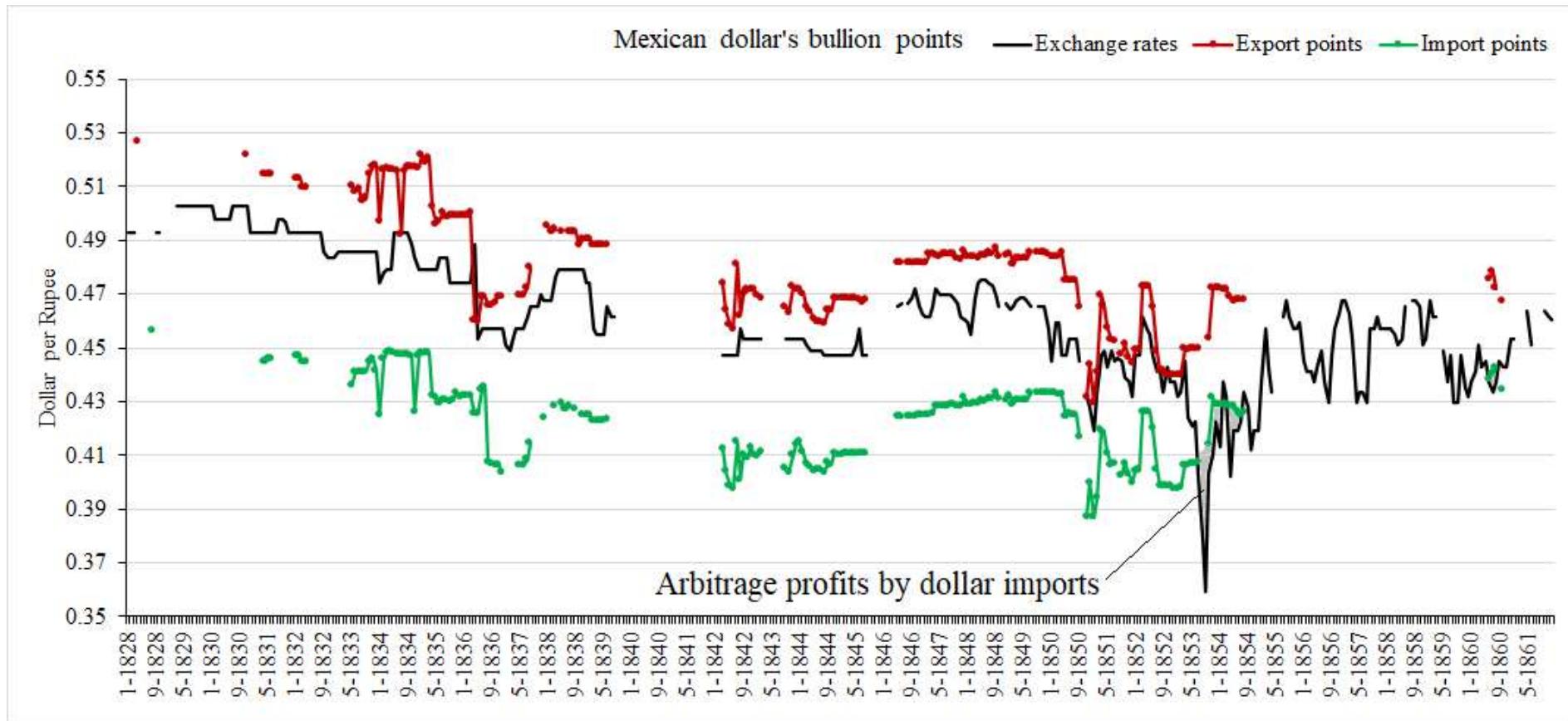
After early 1836, the exchange rates started exceeding Spanish dollar's import points, indicating that Sp. Dollars were likely to be imported in Canton/HK from Calcutta if there were the coins in the latter's market.

Canton(-1845)/Hong Kong's silver points in Spanish Dollar with Bombay, Jan. 1828-Dec. 1865 (Dollar per Rupee: before Sep. 1835 Bombay, afterwards EIC Rupee)



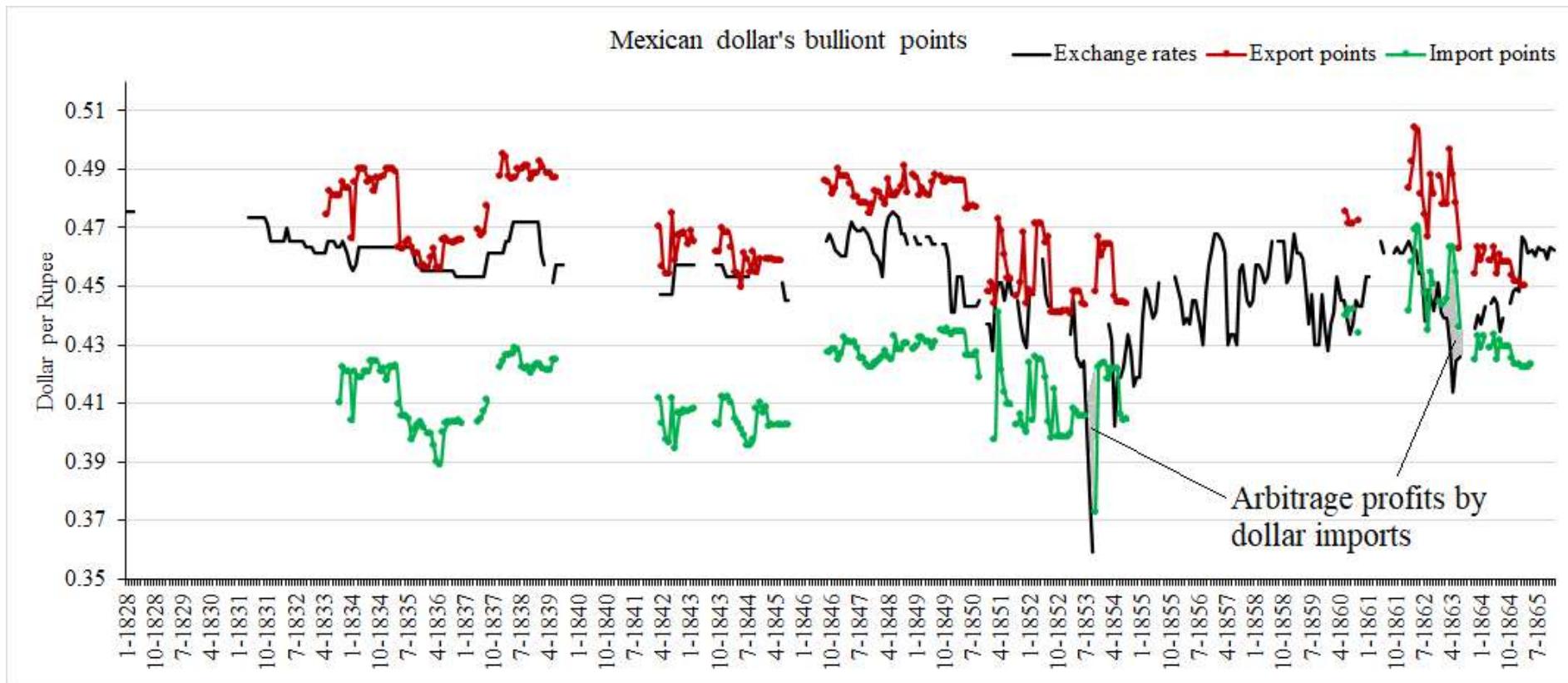
Same pattern with that between Canton/Hong Kong and Calcutta

Canton(-1845)/Hong Kong's silver points in Mexican Dollar with Calcutta, Jan. 1828-Dec. 1861 (Dollar per Rupee: before May. 1836 Sicca, afterwards EIC Rupee)



The exchange rates moved within the bounds of Mexican dollar's silver points, while the rates tended to be close to export points before 1853.
After 1853, the exchange rates moved close to the Mexican dollar's import points.

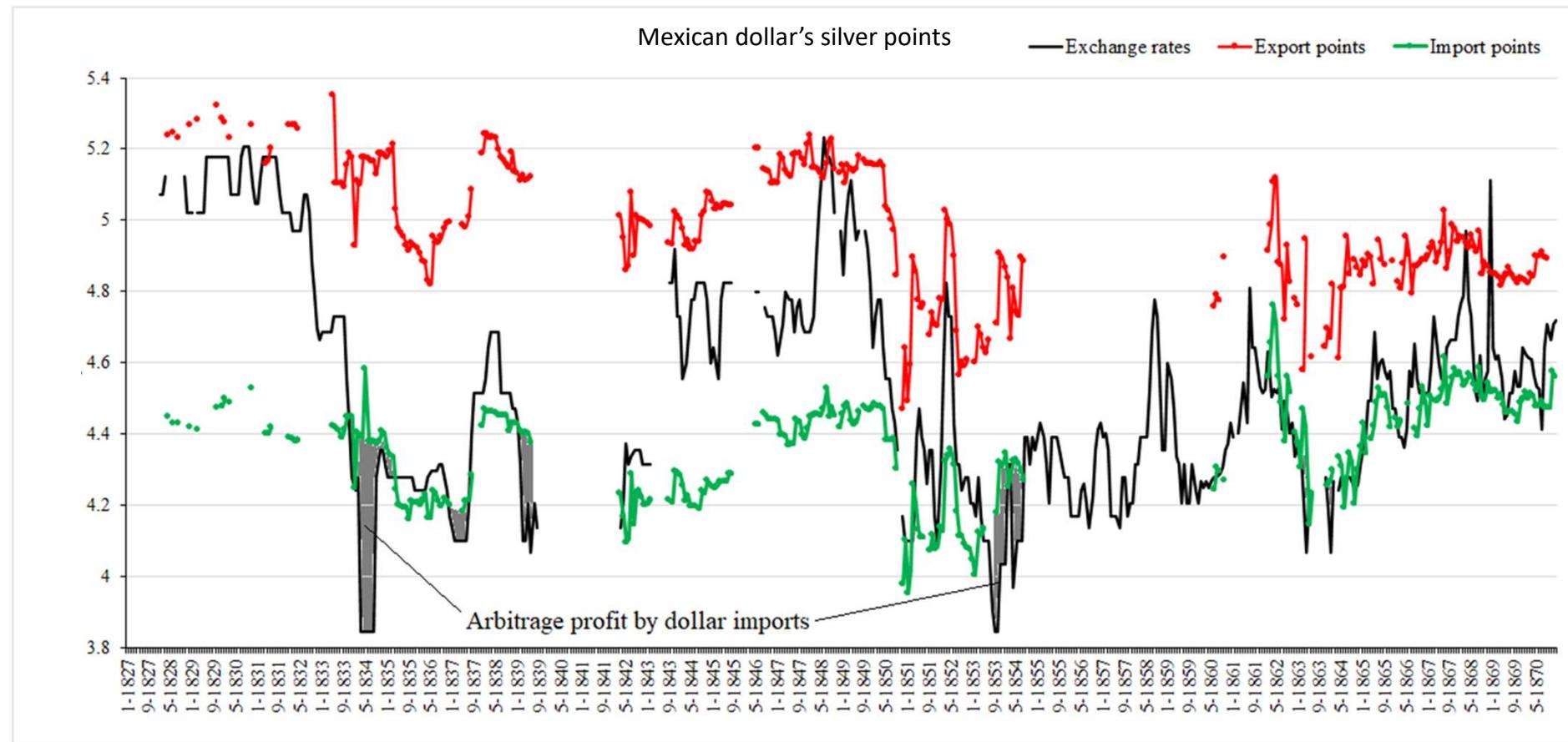
Canton(-1845)/Hong Kong's silver points in Mexican Dollar with Bombay, Jan. 1828-Dec. 1865 (Dollar per Rupee: before Sep. 1835 Bombay, afterwards EIC Rupee)



Same pattern with that between Canton/Hong Kong and Calcutta

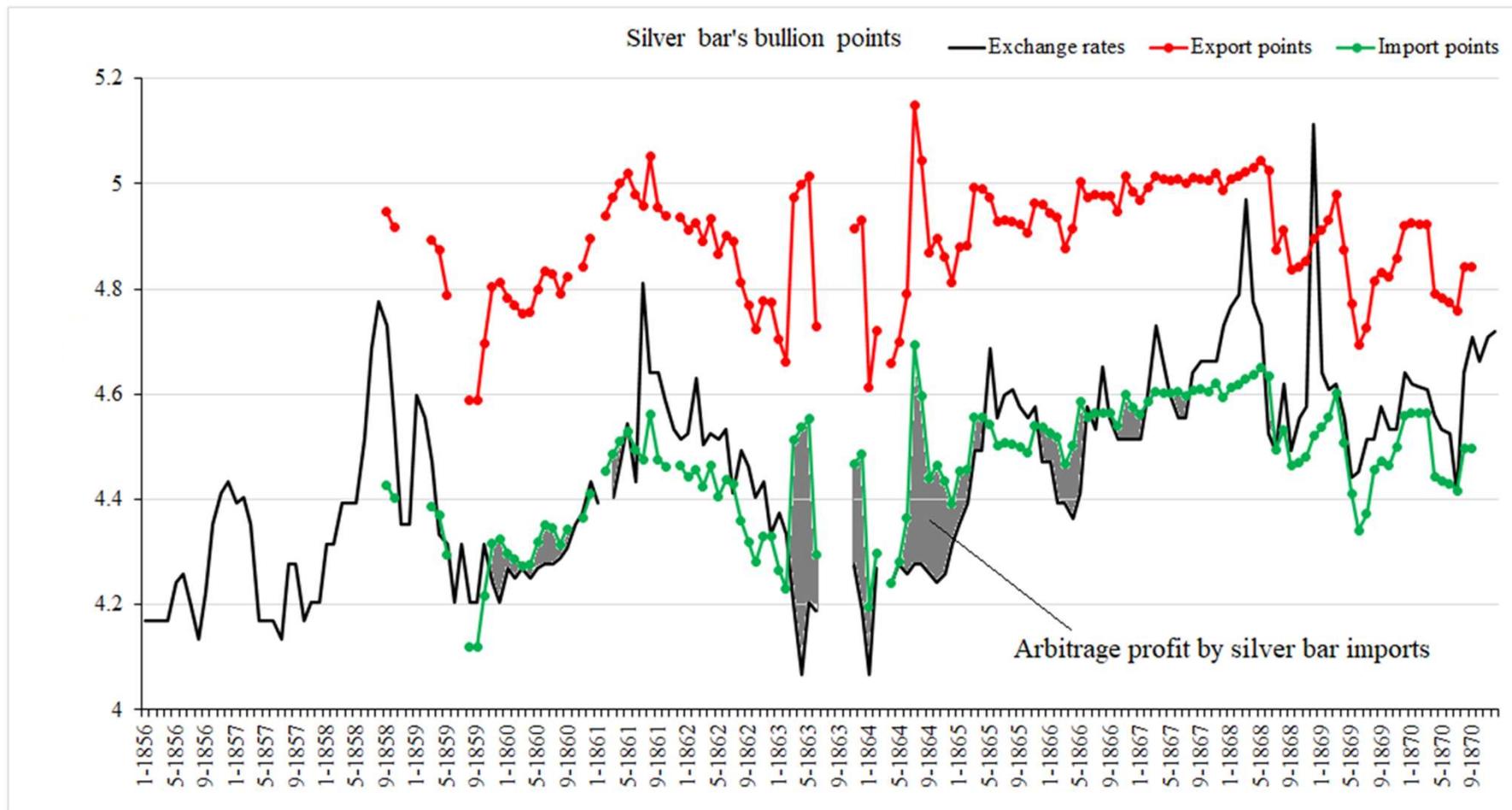
Silver Points in Canton/Hong Kong with London

Canton/HK's silver points in Mexican Dollar with London, Jan. 1828-Dec. 1870 (Dollar per Pound)



Over 1834-39 the exchange rates dropped below the import bounds making arbitrage profit by dollar imports. However, thereafter the rates stayed within the band until 1854. During the 1850s-60s, while the exchange rates tended to move along the import points, suggesting the stabilization effect of silver point mechanism.

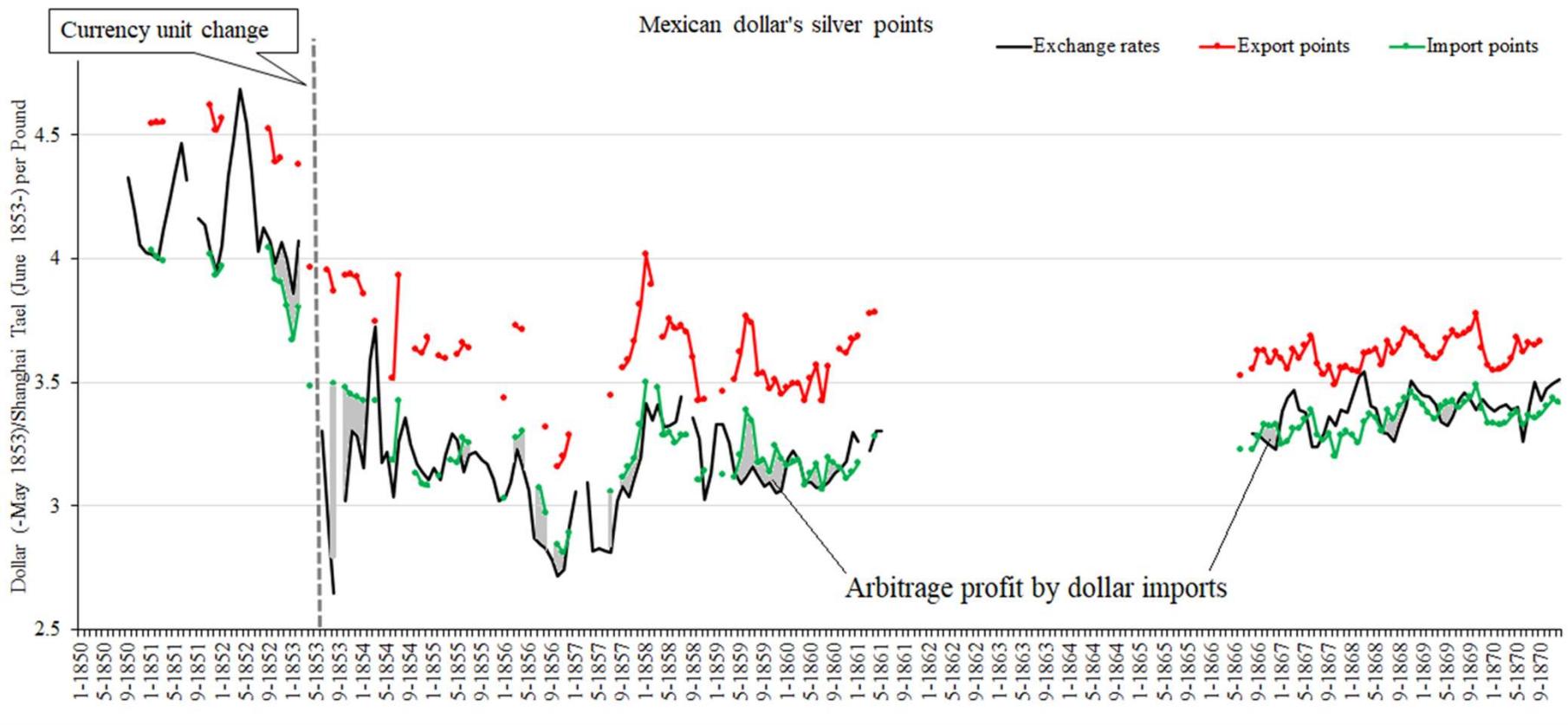
Hong Kong's silver points in Silver bar with London Jan. 1856-Dec. 1870 (Dollar per Pound)



Because the exchange rates exceeded the import points there were arbitrage profits by importing silver bar from London into Hong Kong. However, the profit margin became smaller after 1868, which is consistent with the actual pattern of China's silver imports from the UK.

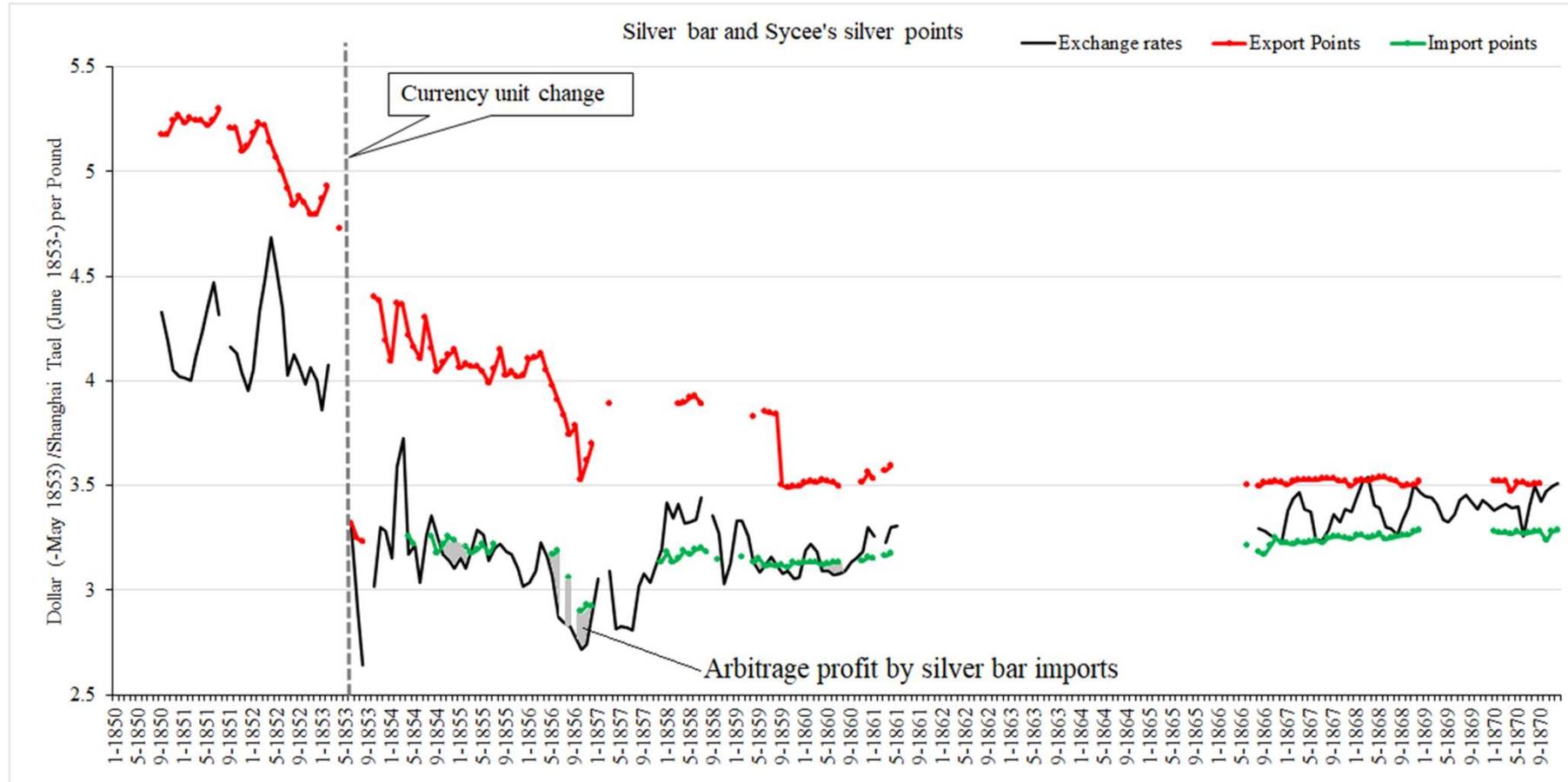
Silver Points in Shanghai with London

Shanghai's silver points in Mexican dollar with London, Jan. 1850-Dec. 1870 (Dollar per Pound—May 1853 thereafter Shanghai Tael per Pound)



The exchange rates tended to range below the import points, bringing the arbitrage profit by importing Mexican dollar from London.

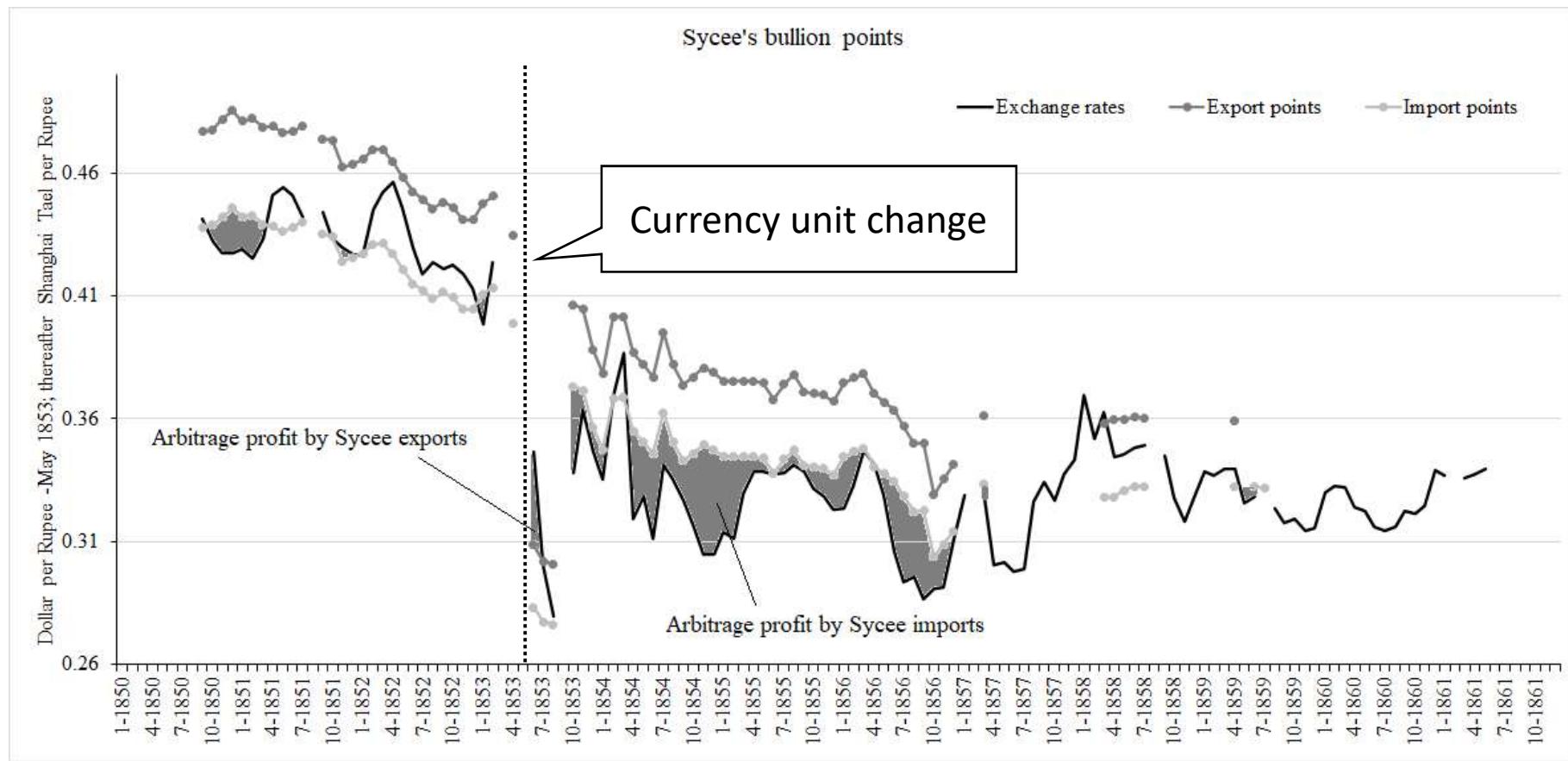
Shanghai's silver points in Silver bar (import) and Sycee (export) with London, Jan. 1850-Dec. 1870 (Dollar per Pound –May 1853 thereafter Shanghai Tael per Pound)



After 1854, arbitrage profit by importing silver bars from London emerged. However, the exchange rates seem to be regulated by the upper and lower bounds after 1866.

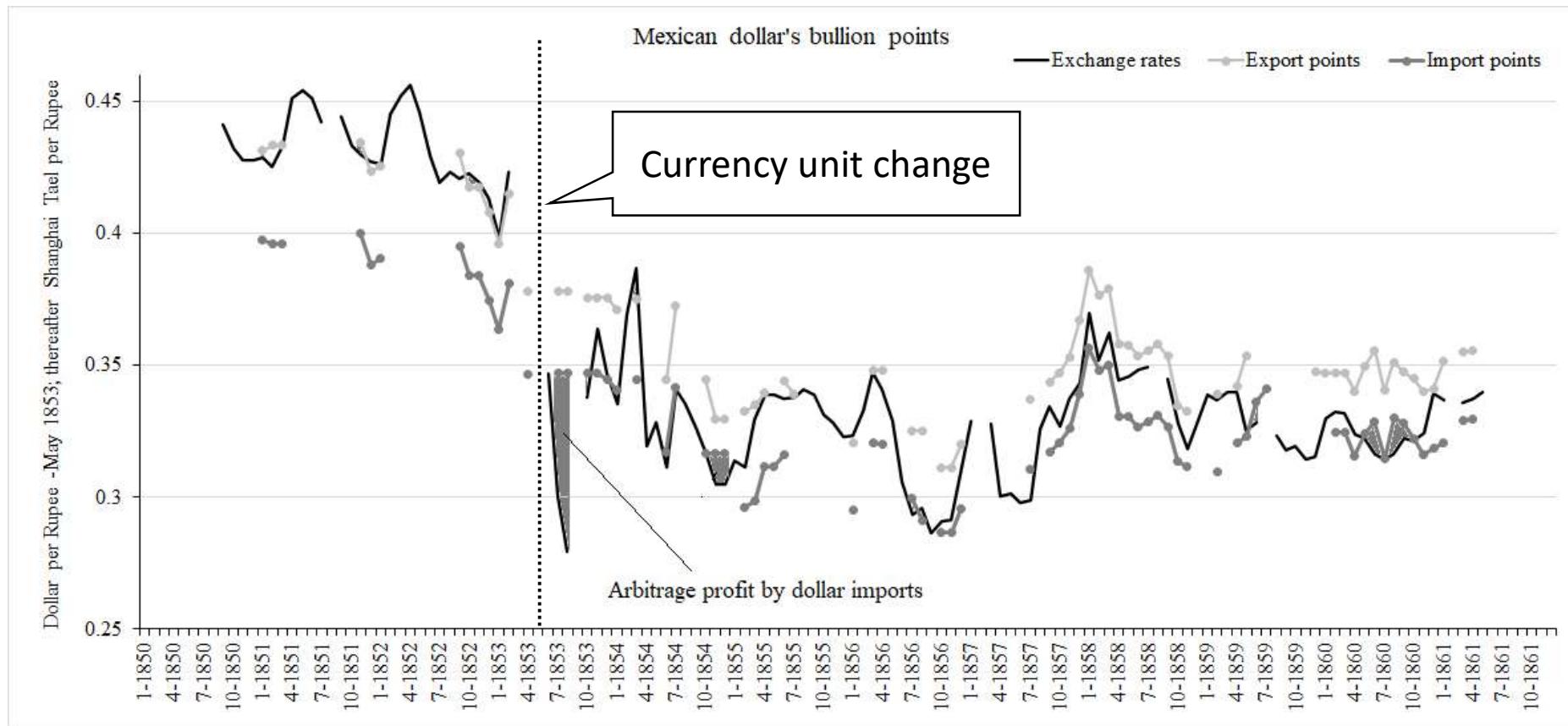
Silver Points in Shanghai with Indian cities

Shanghai's silver points in Sycee with Calcutta, Jan. 1850-Dec. 1861 (Dollar-May 1853 thereafter Shanghai Tael per rupee)



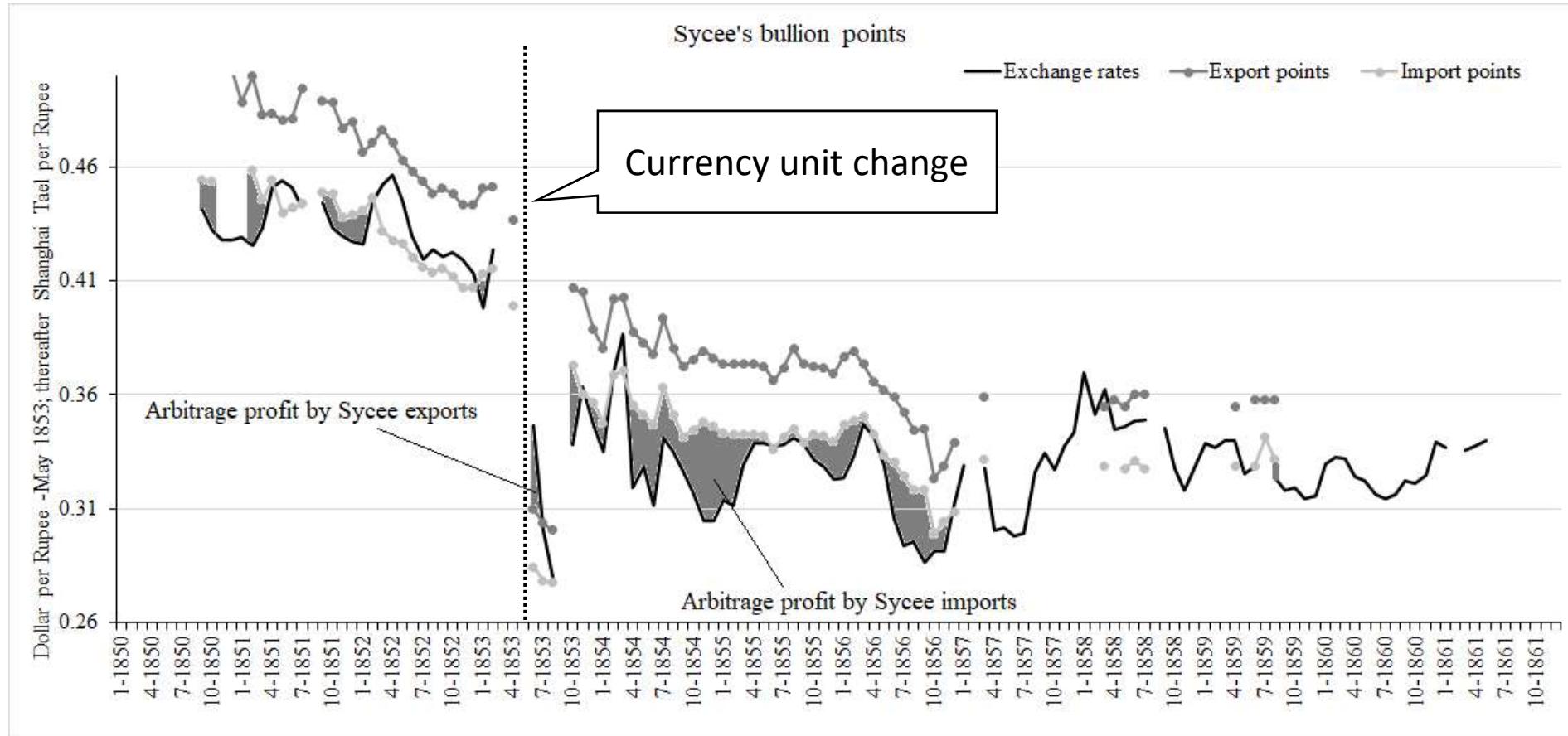
The exchange rates tended to vary around the import points. Over 1853-56, relatively large arbitrage profit by importing Sycee in Shanghai from Calcutta arose.

Shanghai's silver points in Mexican dollar with Calcutta, Jan. 1850-Dec. 1861 (Dollar-May 1853 thereafter Shanghai Tael per rupee)



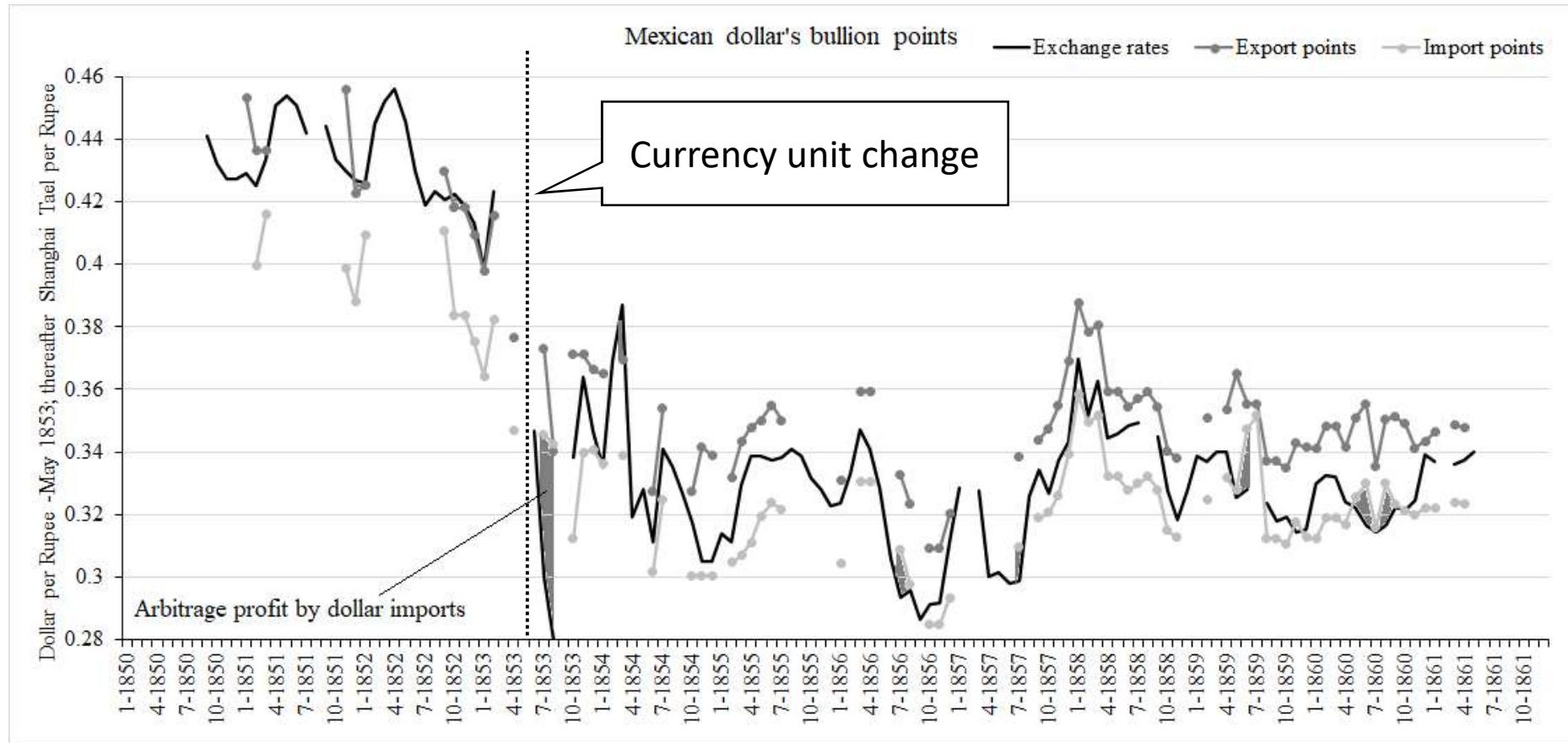
The exchange rates appear to be regulated by the band of Mexican dollar's bullion points throughout the period.

Shanghai's silver points in Sycee with Bombay, Jan. 1850-Dec. 1861 (Dollar-May 1853 thereafter Shanghai Tael per rupee)



Similar pattern with Sycee's bullion points in Shanghai with Calcutta

Shanghai's silver points in Mexican dollar with Bombay, Jan. 1850-Dec. 1861 (Dollar-May 1853 thereafter Shanghai Tael per rupee)



Similar pattern with Mexican dollar's bullion points in Shanghai with Calcutta