CHINESE CAPITAL FLIGHT: 1984-2014

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Presented at:
Western Economic Association International
Annual Meeting, June 2016
Portland, Oregon

ABSTRACT: Since 1984, the foreign debt of the Peoples' Republic of China has increased at a greater rate than would be explained by changes in the country's current account, foreign direct investment and reserve holdings. This pattern is consistent with large-scale outflow of financial capital, commonly referred to as capital flight. Since 2005, capital flight has accelerated reaching $425 billion (plus or minus $60 billion) in 2014 alone. This study provides three estimates for capital flight from China for the period 1984 through 2014 using both Cuddington's balance of payments and more inclusive residual measures. These measures are adjusted to reflect the legitimate assets of the Chinese banking industry, mis-invoicing of China’s trade with its major trading partners (especially Hong Kong), exchange rate changes, and the failure of official debt data to capture certain bank transactions. Based on these estimates, it is concluded that capital controls have little long-term effect on the volume of capital flight, Hong Kong is increasingly a pipeline for capital flight from the mainland, and that ‘traditional’ explanations do not apply to China’s capital flight over the last decade. Finally, corruption, transaction costs, and facilitating migration are considered as possible explanations of the recent acceleration of Chinese capital flight.

JEL# F34, O16

Key terms: capital flight, China, Hong Kong, transaction costs, international capital flows, balance of payments, foreign debt, corruption

Correction, criticisms, and comments would be greatly appreciated. Please do not quote without permission.

This paper has benefited greatly from the comments received from Zheng Song and others at the 2014 Allied Social Science Association, Heriberto Gonzalez Lozano, and Anthony O’Brien.
I. INTRODUCTION

Since the late 1970s, the People’s Republic of China (PRC) has experienced rapid economic growth fueled - in part - by a sharp increase in foreign direct investment (FDI). However, there is evidence that China has not only experienced large-scale capital flight but that this flight is accelerating. (See Wu 1993, Prybyla 1994, Gunter 1996 and 2004, Wu and Tang 2000, Zhu et al 2005, and Sharman 2012.) As a result, China has the largest accumulated capital flight among the top fifteen developing countries. (Kar and LeBlanc 2013, Table 4, p. 13)

What is capital flight? One definition is: “…an outflow of funds from a country motivated by an adverse change in the country’s economic, political or social environment.” (Gunter 2008, p. 434) Some researchers use a narrower definition. Epstein (2005, p. 3) states that: “Capital flight is the transfer of assets abroad in order to reduce loss of principal, loss of return, or loss of control over one’s financial wealth due to government sanctioned activities.”

Dornbusch posits two types of capital flight. The first is motivated by the fear of discrete losses as a result of expected major changes in the exchange rate, political risk, financial repression, and tax considerations. The second type, referred to as "low level capital flight" takes the form of a steady outflow motivated by tax considerations or the inability to diversify a portfolio in the developing country's capital market. (Dornbusch 1990, pp. 4-5)

The scale and variance of capital flight are sources of concern since such flight may contribute to an unnecessary increase in a country's foreign debt, undermine the tax base, and

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1 In 1997, Hong Kong was formally reincorporated back into the People’s Republic of China. However, consistent with “one country, two systems”, Hong Kong continues to report balance of payments data separately from the rest of the People’s Republic. For the purposes of this paper, “China” will refer to the People’s Republic of China minus Hong Kong.
result in a net real capital transfer out of the country (Khan and Ul-Haque, 1985; Kar and Freitas 2012). National authorities almost always consider capital flight to be a crime.

Previous studies of Chinese capital flight have attempted to estimate the volume of capital flight as well as seek explanations for its size and growth. Roache and Maziad (2013) discuss the implications of Chinese capital flight for financial stability and the international use of the Chinese currency, the Renminbi (RMB). They report People’s Bank of China estimates of $60-$80 billion a year of unreported capital flows for the period 2008-2011. (pp, 106-107) These results are roughly the same as the unadjusted residual measure estimated in this paper. Sharman (2012) posits that transaction costs were the major determinant of capital flight while rejecting criminal activities and tax arbitrage as explanations.

Kar and Freitas (2012) estimated gross Chinese capital flight for 2000-2010. Their study identifies the commodity groups most susceptible to trade mis-invoicing and discusses in detail the role of round-tripping as a motivation for Chinese capital flight. Shih (2011) focuses on the effects of the severe concentration of wealth in the Chinese economy. He argues that this concentration means that a relatively small percentage of the Chinese population could be responsible for the rapid growth in capital flight.

Zhu et al (2005) not only provided estimates of capital flight for the period 1982-2001 but also examined why large-scale capital flight from China had less of a negative impact than expected. Gunter (2004) estimated capital flight from China for the period 1984-1998 and discussed various explanations including high domestic financial transactions costs, inappropriate exchange rates, the entrepôt role of Hong Kong, and political uncertainty. Wu and Tang (2000) provide several estimates of Chinese capital flight based on three different estimates of China's external debt. They then examine the implications of capital flight for the value of the
Yuan and the Chinese economy in general. Cai in his 1999 study of outward foreign direct investment noted that the growing amount of corruption might be an important determinant of capital flight. (pp. 857-858) Sicular (1998) used Gunter (1996) capital flight estimates in her study of capital flight and foreign investment in China. She focused on the mystery of why China was simultaneously experiencing large amounts of inward foreign capital investment and outward capital flight. She concluded that an important component of an explanation was the different incentives faced by foreign and domestic investors.

This current paper extends Gunter (2004) in several ways. First, the same techniques for estimating capital flight and adjusting these estimates for the effects of legitimate foreign bank assets, trade mis-invoicing, and incomplete foreign debt coverage are used to produce estimates of Chinese capital flight for an extended period, 1984-2014. Second, the reported international reserves and foreign debt of China are adjusted to reflect exchange rate changes. Third, a variety of possible determinates of Chinese capital flight are considered including: an over-valued exchange rate, political and economic uncertainty, capital controls, corruption, an unusual pattern of transaction costs, and capital flight to finance migration.

II. MEASURING CAPITAL FLIGHT

The methods of capital flight are limited only by human ingenuity. It can range from carrying a briefcase full of currency across a border to sophisticated financial transactions involving offshore havens such as the British Virgin or Cayman Islands. Each method incorporates a three-way tradeoff among security, secrecy, and return. (Walter 1985) It is this tradeoff that makes it possible to estimate capital flight since completely secret transactions are not favored since these methods tend to have negative returns and little security. However, because some capital flight is
never suspected, the capital flight estimates developed below underestimate the true volume of
capital flight from China.

Is it more useful to estimate gross or net capital flight? Kar and Freitas (2012) focus on
gross capital flight arguing that it is the outflow of capital that is most relevant both for
understanding the effects of capital flight on the source country as well as developing policy
responses. However, gross capital flight (usually described as gross excluding reversals or GER)
ignores the effects of possible repatriation of flight capital. This leads to exaggerated estimates of
accumulated flight capital. Also, as discussed below, while most policies that reduce capital flight
also encourage repatriation; there are some – such as capital controls – that tend to reduce capital
flight while discouraging repatriation.

The use of GER also runs into empirical problems. As discussed below, one of the data
difficulties in estimating the effect of trade mis-invoicing on capital flight is that exports may be
recorded in one period while the corresponding import is recorded in the next period. In the case of
Chinese exports, this would lead to apparent over-invoicing of exports – consistent with capital
repatriation - in the earlier period followed by under-invoicing of exports – consistent with capital
flight - in the latter period. Excluding the first case while including the second would bias the
results in the direction of higher capital flight. Of course, if China were the importer, the same
situation occurs with the years periods reversed. It should be noted that when the Chinese trade of
all twenty-three industrial states is aggregated then there are no cases of either under-invoicing of
Chinese imports or over-invoicing of Chinese exports.

The estimates in this study use annual - not quarterly – data. The seasonal adjustments
required by quarterly data not only are large but also have changed substantially during the
sample period reflecting the increasing importance of Australia and New Zealand as sources of
Chinese imports and the reduced importance of the US as a market for Chinese exports. In addition, the timing of the official recognition of exports and imports becomes more problematic in the quarterly data since it becomes more common that an export would be recorded in one quarter by one nation while the corresponding import is recorded in the next quarter by its trading partner.

One method of estimating capital flight is the balance of payments method credited to Cuddington. He believed that the most important characteristic of flight capital was that it was "hot" money. Small changes in perceived returns or risks result in a rapid transfer of these funds out of the country. Based on this characteristic, Cuddington's balance of payments estimate of capital flight is equal to the sum of reported short-term capital exports by the non-bank sector and, the balancing entry, errors and omissions. The latter inclusion reflected Cuddington's belief that errors and omissions largely reflected unrecorded short-term capital flows (1986, p. 3). Estimates for the 2014 PRC capital flight using this balance of payments formula is given in Line G of Tables 1, 2A, and 2B as well as Line G on Figure 1. This balance of payments measure shows substantial year-to-year variation ranging from a low of minus $69 billion – a net capital inflow – in 2007 to a high of $197 billion net capital outflow – capital flight - in 2014.

A more widely accepted method of estimating capital flight defines capital flight as a residual. (See Erbe, 1985 and World Bank, 1985.) The current account balance, changes in reserves and the amount of net FDI determine the amount of necessary international borrowing for a nation. If actual foreign borrowing during a period exceeds this necessary amount then it is assumed that the difference or residual represents additional borrowing to offset capital flight. The estimate for 2014 Chinese capital flight using this residual method is also shown in Table 1. In that year, the PRC had a current account surplus of about $220 billion while there was a net inflow of FDI of about $158 billion. Since, China’s
international debt increased by $89 billion in 2014, one would expect – in the absence of capital flight – a $467 billion increase in the country’s international reserves (i.e. $467 = $220 + $158 + $89). However, China’s international reserves increased by only $118 billion, which implies about $348 billion of capital flight – Line H in Tables 1, 2A, and 2B as well as Line H on Figure 1. Estimated capital flight for 2014 is the highest ever recorded; it is more than three times greater than the 2011 estimate of $92 billion. Wu and Tang (2000, Table 4, p. 70) used the same method in their estimates of Chinese capital flight for the period 1990-1998 and got roughly the same results for the overlapping period.

The balance of payments approach and the residual measure, which rely on different methods, provide rough guides to the direction and volume of Chinese capital flight. However, both approaches are flawed in different ways. The next section will attempt to improve these estimates of capital flight by adjusting for legitimate resident external capital, mis-invoicing of exports and imports, exchange rate changes, and correcting some exclusions in China’s foreign debt data. Rather than concentrate on a single measure of Chinese capital flight, these adjustments will be made – as appropriate - to both the balance of payments and the residual measures in order to provide a rough guide to the direction and volume of unreported capital flows and yet avoid the danger of implying an accuracy to the results that is not deserved.

Table 1: 2014 Capital Flight Estimates

<table>
<thead>
<tr>
<th>A</th>
<th>Non-Bank Private Short-term Capital Outflows</th>
<th>Balance of Payments Measure</th>
<th>Residual Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$56.8^{8th} billion</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Net Errors and Omissions Outflows</td>
<td>$140.1 billion</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Current Account Balance</td>
<td></td>
<td>$219.7 billion</td>
</tr>
<tr>
<td>D</td>
<td>Net Foreign Direct Investment</td>
<td></td>
<td>$157.9 billion</td>
</tr>
</tbody>
</table>
Change in International Reserves  
- $117.8 billion

Change in International Debt  
$88.7 billion

Unadjusted Capital Flight - BoP  
$196.9 billion

Unadjusted Capital Flight - Residual  
$348.5 billion

Reported Foreign Assets  
$127.3 billion

Debt Correction  
$72.3 billion

Exchange Rate Correction  
($10.4 billion

PRC/Hong Kong Trade Mis-invoicing  
$78.9 billion

Adjusted Capital Flight – BoP  
$69.6 billion

Adjusted Capital Flight – Low Residual  
$362.0 billion

PRC Trade Mis-invoicing (Substitution for PRC/Hong Kong Mis-invoicing – Line K)  
$201.1 billion

Adjusted Capital Flight – High Residual  
$484.2 billion

As of March 21, 2016, 2014 data for non-bank private short-term capital outflows has not been reported. Estimate for 2014 is five year average (2009-2013). Note that 2013 data was $62.1 billion outflow.


Figure 1: Basic Capital Flight Estimates (billions of $)
III. ADJUSTMENTS TO CAPITAL FLIGHT ESTIMATES

1. Legitimate Resident Foreign Capital

All holdings of foreign financial assets are not evidence of capital flight since some may be necessary to facilitate foreign trade and finance. (Perez et al, 2012, p. 110) It seems especially inappropriate to count as capital flight, foreign financial asset holdings that are reported to the Chinese government. Therefore one should reduce capital flight estimates by any increases in the non-reserve foreign assets of China’s banking system as reported by the People's Bank of China. From 1984 through 2014, there have been large year-to-year changes in this adjustment for legitimate resident foreign assets. For example, the largest negative change – increasing estimated capital flight – occurred in 2009 when legitimate resident foreign assets decreased by $66 billion. The largest positive change - decreasing estimated capital flight for that year – was $127 billion in 2014. (Shown as Line I on Tables 1, 2A, and 2B.)

Should there also be an adjustment for outward foreign direct investment (OFDI)? OFDI has grown rapidly from about $13 billion in 2007 to almost $100 billion in 2014. (IMF BOP 2015, Line 3AAOOOOAAA, p. 262) A proportion of this OFDI is probably capital flight. However, most of China’s OFDI is by state owned enterprises. (Sauvant and Chen 2014, pp. 155-156) In addition, to the strictly economic motivations for OFDI, Chinese authorities may encourage OFDI investment as part of its international political strategy or to reduce pressure for RMB appreciation. Therefore, it is difficult to argue that OFDI represents illegal capital flight if it is not only approved by the government but also mostly executed by state organizations.
2. Incomplete Foreign Debt Data

The remaining adjustments are only appropriate for the residual measure. There is evidence that foreign debt is often understated i.e. that foreign banks report larger debts of Chinese entities than are reported by Chinese authorities. One method of adjusting for this discrepancy is to add foreign debt reported by the Chinese government – primarily public debt - to the liabilities of Chinese entities – both public and private sector debt - reported by international banks. This sum, of course, would “double count” loans from foreign banks to public entities in China. Since China provided a breakdown of foreign debt by maturity and, for long-term debt, by creditor, one can correct for this double counting.

If the sum of short-term debt and long-term debt reported as owed to foreign banks is greater than the reported liabilities of the international banks then it is assumed that the reported Chinese government debt figures are correct. This occurred in about half of the years in the sample (1987, 1989, 1992, 1997, 1999, and 2002 through 2011). However, if incorporating foreign bank data leads to a larger debt estimate then the revised data is used.

This debt adjustment can have a significant effect on the residual method since it changes the amount of foreign debt to be "explained." As is well known, China’s foreign debt has grown rapidly since 1984, doubling about every six years. Most recently, foreign debt as reported by the Chinese authorities grew from $871 billion in 2013 to $960 billion in 2014 – an increase of $89 billion. However, after adjusting for unreported debt to foreign banks, China’s foreign debt totaled an estimated $1,146 billion in 2013 and increased by $161 billion to $1,307 billion in 2014. This adjustment of $72 billion ($161 billion minus $89 billion) – consistent with increased capital flight – is given on line J of Tables 1, 2A, and 2B.
### Table 2A
#### Measures of Capital Flight
($ millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>G. Balance of Payments Measure</th>
<th>H. Residual Measures</th>
<th>I. Reported Foreign Assets</th>
<th>J. Bank Debt Adjustment</th>
<th>K. Exchange Rate Correction</th>
<th>L. PRC and Hong Kong</th>
<th>O. PRC Only</th>
<th>Adjusted Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cuddington Method</td>
<td>World Bank Method</td>
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<td>1984</td>
<td>$1,775</td>
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<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$2,490</td>
<td>$2,490</td>
<td>$1,775</td>
</tr>
<tr>
<td>1985</td>
<td>$310</td>
<td>-$1,051</td>
<td>$0</td>
<td>$2,396</td>
<td>$1,931</td>
<td>$5,058</td>
<td>$5,058</td>
<td>$310</td>
</tr>
<tr>
<td>1986</td>
<td>-$209</td>
<td>$3,459</td>
<td>-$831</td>
<td>$631</td>
<td>$865</td>
<td>$6,749</td>
<td>$6,749</td>
<td>-$209</td>
</tr>
<tr>
<td>1987</td>
<td>$1,493</td>
<td>$8,806</td>
<td>$3,872</td>
<td>$2,055</td>
<td>$194</td>
<td>$8,773</td>
<td>$8,773</td>
<td>$1,493</td>
</tr>
<tr>
<td>1988</td>
<td>$1,598</td>
<td>$3,268</td>
<td>$1,862</td>
<td>-$2,704</td>
<td>$663</td>
<td>$12,000</td>
<td>$12,000</td>
<td>$1,598</td>
</tr>
<tr>
<td>1989</td>
<td>$869</td>
<td>$1,267</td>
<td>-$2,704</td>
<td>$2,055</td>
<td>$2,186</td>
<td>$19,685</td>
<td>$19,685</td>
<td>$869</td>
</tr>
<tr>
<td>1990</td>
<td>$8,482</td>
<td>$13,811</td>
<td>$6,029</td>
<td>$2,858</td>
<td>$1,486</td>
<td>$30,028</td>
<td>$30,028</td>
<td>$8,482</td>
</tr>
<tr>
<td>1991</td>
<td>-$337</td>
<td>$7,146</td>
<td>$3,468</td>
<td>$4,186</td>
<td>-$367</td>
<td>$36,393</td>
<td>$36,393</td>
<td>-$337</td>
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<tr>
<td>1992</td>
<td>$11,698</td>
<td>$27,786</td>
<td>$4,597</td>
<td>$1,619</td>
<td>$4,361</td>
<td>$44,265</td>
<td>$44,265</td>
<td>$11,698</td>
</tr>
<tr>
<td>1993</td>
<td>$13,663</td>
<td>$50,855</td>
<td>$25,274</td>
<td>$4,889</td>
<td>$9,039</td>
<td>$54,982</td>
<td>$54,982</td>
<td>$13,663</td>
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<tr>
<td>1994</td>
<td>$12,802</td>
<td>$24,771</td>
<td>$1,287</td>
<td>$3,361</td>
<td>-$6,870</td>
<td>$58,553</td>
<td>$58,553</td>
<td>$12,802</td>
</tr>
<tr>
<td>1995</td>
<td>$17,333</td>
<td>$32,631</td>
<td>-$5,192</td>
<td>$12,597</td>
<td>$8,327</td>
<td>$95,032</td>
<td>$95,032</td>
<td>$17,333</td>
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<tr>
<td>1996</td>
<td>$16,418</td>
<td>$26,445</td>
<td>$12,128</td>
<td>$9,093</td>
<td>$17,594</td>
<td>$115,298</td>
<td>$115,298</td>
<td>$16,418</td>
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<tr>
<td>1997</td>
<td>$12,802</td>
<td>$32,631</td>
<td>-$5,192</td>
<td>$17,594</td>
<td>$11,698</td>
<td>$153,540</td>
<td>$153,540</td>
<td>$12,802</td>
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<td>1998</td>
<td>$17,333</td>
<td>$66,260</td>
<td>$8,327</td>
<td>$17,594</td>
<td>$17,168</td>
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</table>
## Table 2B

Measures of Capital Flight

($ millions)

<table>
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</thead>
<tbody>
<tr>
<td><strong>G. Balance of Payments Measure</strong></td>
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<tr>
<td><strong>H. Residual Measures</strong></td>
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<tr>
<td><strong>I. Reported Foreign Assets</strong></td>
<td>$5,517</td>
<td>$31,071</td>
<td>$13,780</td>
<td>$32,220</td>
<td>-$16,475</td>
<td>$34,065</td>
<td>$49,944</td>
<td>$15,341</td>
<td>$83,461</td>
<td>$69,600</td>
<td>$55,478</td>
<td>$8,586</td>
<td>$43,352</td>
<td>$91,860</td>
<td>$301,104</td>
<td>$14,098</td>
</tr>
<tr>
<td><strong>J. Bank Debt Adjustment</strong></td>
<td>-$14,099</td>
<td>$9,511</td>
<td>-$36,042</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$11,957</td>
<td>$263,531</td>
<td>$72,292</td>
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</tr>
<tr>
<td><strong>K. Exchange Rate Correction</strong></td>
<td>$25,651</td>
<td>-$3,532</td>
<td>-$3,949</td>
<td>$474</td>
<td>$12,463</td>
<td>$12,847</td>
<td>$-4,015</td>
<td>$-7,090</td>
<td>$18,099</td>
<td>$35,591</td>
<td>$-16,793</td>
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<td>$61,943</td>
<td>$-49,592</td>
<td>$-37,287</td>
<td>$-10,422</td>
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<td><strong>Trade Mis-invoicing Adjustment</strong></td>
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<tr>
<td>L. PRC and Hong Kong</td>
<td>$19,455</td>
<td>$25,873</td>
<td>$301</td>
<td>$34,474</td>
<td>$44,987</td>
<td>$72,460</td>
<td>$70,903</td>
<td>$59,796</td>
<td>$73,125</td>
<td>$74,059</td>
<td>$77,663</td>
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<td>$86,061</td>
<td>$82,323</td>
<td>$78,504</td>
<td>$78,939</td>
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<td>O. PRC Only</td>
<td>$82,561</td>
<td>$99,173</td>
<td>$52,597</td>
<td>$104,504</td>
<td>$119,309</td>
<td>$155,334</td>
<td>$163,380</td>
<td>$161,175</td>
<td>$179,840</td>
<td>$185,201</td>
<td>$163,227</td>
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<td>$205,229</td>
<td>$200,819</td>
<td>$202,214</td>
<td>$201,145</td>
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<td><strong>Adjusted Estimates</strong></td>
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<td></td>
</tr>
<tr>
<td>N. Low Residual (PRC &amp; HK)</td>
<td>$81,289</td>
<td>$46,090</td>
<td>-$7,748</td>
<td>$10,859</td>
<td>$50,913</td>
<td>$22,558</td>
<td>$32,285</td>
<td>$86,635</td>
<td>$161,454</td>
<td>$111,400</td>
<td>$134,993</td>
<td>$104,368</td>
<td>$135,314</td>
<td>$272,175</td>
<td>$304,544</td>
<td>$361,960</td>
</tr>
<tr>
<td>P. High Residual (PRC only)</td>
<td>$144,395</td>
<td>$119,390</td>
<td>$44,548</td>
<td>$80,889</td>
<td>$125,235</td>
<td>$105,432</td>
<td>$124,762</td>
<td>$187,014</td>
<td>$268,169</td>
<td>$222,542</td>
<td>$220,557</td>
<td>$210,305</td>
<td>$254,482</td>
<td>$390,671</td>
<td>$428,254</td>
<td>$484,166</td>
</tr>
</tbody>
</table>
3. Exchange Rate Adjustment

Another concern is the effect of exchange rate changes on China’s foreign debt and international reserves. Foreign debt denominated in a currency that depreciates with respect to the US dollar will lead to a reduction in the reported dollar debt. (Cline 1994, pp. 110-113) The effect of changing exchange rates on Chinese foreign debt has decreased over the sample period due to increasing dollar dominance. Dollar denominated debt rose from about 24% of China’s total foreign debt in 1984 to almost 94% in 2014. (World Bank 2016) In 2014, primarily as a result of changes in the yen/dollar and euro/dollar rate, reported Chinese foreign debt understated the true level of debt by only $2.3 billion. This understatement is consistent with an increase in capital flight.

In a similar fashion, changes in China’s international reserves should also be adjusted for exchange rate changes. Unfortunately, the currency denomination of the country’s international reserves is a state secret. However, it is currently believed that “about two-thirds are held in US dollars, a quarter in Euros, and the rest in Japanese yen and British pounds.” (Wildau 2014) It seems plausible that the currency denomination of China’s international reserves at the beginning of the sample period were approximately the same as its foreign debt – 25% US dollars, 50% yen, 12% Deutsch marks, and the remainder in British pounds. This study assumes that the proportions of each currency smoothly changed from 1984 to 2014 substituting Euros for Deutsch marks in 1999. In 2014, the depreciation of the yen and the euro with respect to the US dollar more than offset the appreciation of the British pound and resulted in a $12.7 billion
understatement of the growth in the country international reserves. This understatement is consistent with a lower level of capital flight.

Note that a depreciation of the yen, euro, etc. simultaneously leads to an increase in reserves – consistent with lower capital flight – as well as an increase in foreign debt – consistent with higher capital flight. In 2014, the depreciation of the yen and euro resulted in a $12.7 billion increase in reserves and a $2.3 billion increase in foreign debt. Therefore the net effect was a $10.4 billion reduction in the apparent capital flight. This combined exchange rate adjustment is given on line K in Tables 1, 2A, and 2B.

4. Mis-invoicing of Exports and Imports

Another needed adjustment is to correct for mis-invoicing of exports and imports. The residual measure assumes that the current account measure is accurate. If the actual exports were larger or imports were smaller than reported in the official statistics then this increases the size of the residual that will be identified as capital flight. McDonald argued that both reported exports and imports might be biased as a result of deliberate mis-invoicing in order to circumvent trade controls, avoid import tariffs and/or facilitate capital flight (1985). For example, a Chinese resident may under-invoice his exports and then direct the difference between the invoice amount and his actual receipts to some financial haven. Such under-invoicing of exports would reduce the reported Chinese trade surplus. Similarly, a Chinese resident may over-invoice her imports. If capital flight were her motivation then the payment for these imports would be divided between the actual cost of the imports and an unreported deposit in some foreign financial haven financial. Over-invoicing of imports also has the effect of worsening the country's reported balance of trade. When foreign exchange is selling at a premium in the
currency parallel market, over-invoicing of imports might also provide a means of obtaining additional foreign exchange to sell on the parallel market.

Accompanying the growth and changing pattern of China’s trade since 1984 has been a growing discrepancy in the statistics reported for bilateral trade. One should be able to roughly match up China’s exports to one or more of its trading partners as reported by China and the counterpart transaction of these countries from China as reported by these counties. The difficulties of making this type of comparison have been well known since Morgenstern's seminal book on the subject of the accuracy of economic data (1965, Chap. 9). First, one must adjust for the additional costs of insurance and freight (cif) that adhere to an import that are not included in the price of an export. According to the International Monetary Fund, this cif difference is approximately 9% for China. Second, comparisons can also be affected by problems of timing. An export may be recorded in one period while the corresponding import is not recorded until the next period. Third, the quality of import data tends to be better than the quality of export data since governments more carefully monitor imports in order to maximize tariff income or enforce quotas. Fourth, while the country of origin of an import can often be determined by close examination of the product; the ultimate destination of an export is often impossible to determine since it may be re-exported by one or more intermediate countries before its journey is complete. Finally, comparisons of counterpart data can be complicated by deliberate attempts of exporters or importers to deceive customs officials or other government agents. This deception can be motivated by the avoidance of tariffs, non-tariff trade barriers, or as a means of facilitating capital flight.

To estimate mis-invoicing, some studies use the data from all of China’s trading partners. (Kar and Freitas 2012, p. 3) However, many countries in the world have lower quality trade data
than China. Instead, this study calculates mis-invoicing only for China’s trade with twenty-three high-income industrial trading partners. In 2014, these countries were the destination of about 66% of China’s exports and the source of 56% of China’s imports. With respect to these trading partners, the Chinese government reported $951 billion in Chinese exports and $710 billion in imports in 2014. However, after adjusting for the difference between cif and fob, these China’s twenty-three high-income industrial trading partners reported Chinese exports of $1,129 billion ($1.1 trillion) and Chinese imports of $593 billion in that year. Combining these discrepancies points to positive mis-invoicing – consistent with capital flight - of $201 billion in 2014! (Line O on Tables 1, 2A, and 2B)

Not all of the countries reported under-invoicing of Chinese exports and over-invoicing of Chinese imports consistent with capital flight. Some countries reported the opposite – over-invoicing of exports and under-invoicing of imports – in one year and then the reverse for the next year. See for example, China-Spain trade in 1995-1996, China-Portugal trade in 1999-2000, China-Norway trade in 1998-1999 and again in 2005-2006. As mentioned above, it is possible that the exporting country registered an export in one year but the corresponding import was not registered until the next year.

However, there are four countries that consistently show evidence of over-invoicing Chinese exports and under-invoicing Chinese imports. These countries are trade entrepôts for the EU: Belgium, Luxembourg, the Netherlands, and, to a lesser extent, Greece. Foreign trade dominates the economies of these entrepôt countries. For example, 2014 international trade for the Netherlands was almost 160% of its GDP. (IMF IFS 2015, pp. 602-604) Therefore the trade data for these countries is especially vulnerable to errors in destination or provenance. Since the major non-China trading partners of these entrepôt states are also included in the sample, the
aggregate data is probably more accurate than that of the individual states. In addition, it should be noted that these countries are minor trade partners for China and their exclusion would change the estimates of trade mis-invoicing by less than 1%.

5. Role of Hong Kong

Any analysis of Chinese capital flight is complicated by the importance of Hong Kong as both a capital and trade entrepôt for China. This importance is a function of geography, history, comparative advantage, and the 1997 reunification. While some state that Hong Kong is still the laissez-faire state that flourished under British rule prior to reunification. (Huang 2008, p. 3), there is evidence discussed below that its role has evolved since reunification. What is unambiguous is that Hong Kong remains one of Mainland China's most important export destinations. Chinese exports to Hong Kong totaled about $363 billion in 2014, second only to the United States, $397 billion, as an export destination. However, a large and growing proportion of Hong Kong's international merchandise transactions take the form of re-exports. In 1991, re-exports accounted for about 70% of the Hong Kong Special Administrative Region’s total exports. However, in 2014, re-exports accounted for over 98%. This change was a function of a 676% increase in re-exports combined with a 76% decrease in domestic exports. (Census and Statistics Department 2016, p. 1) China’s imports from Hong Kong in 2014 were small, only about $13 billion, less than Italy.

Bilateral trade between the China and Hong Kong reveals an interesting pattern. As was discussed above, Chinese data on trade with industrial nations reveals an over-invoicing of imports and an under-invoicing of exports. Both of these mis-invoicing results are consistent with capital flight. However, with respect to its trade with the same twenty-three countries, Hong
Kong tends to show under-invoicing of both exports and imports that to a great extent offset the mis-invoicing of China. In other words, the combined trade data for China and Hong Kong (adjusted for double counting) reveals much smaller mis-invoicing with respect to high-income countries than China considered separately.

To the extent that this offsetting occurs, it lends support to the view that the discrepancies in China’s trade statistics may be caused more by problems in determining provenance and destination of merchandise trade rather than capital flight. In fact, until 2001, the contribution of the combined China-Hong Kong estimates of mis-invoicing to capital flight was small and often negative. However, since then the combined China-Hong Kong mis-invoicing increased although remaining substantially less than the mis-invoicing attributed to China alone. For example, in 2014, as can be seen on Table 1, China’s mis-invoicing with respect to the major industrial nations was about $201 billion (Line O on Tables 1, 2A, and 2B.), which is two and a half times more than the combined China-Hong Kong mis-invoicing of about $79 billion. (Line L on Tables 1, 2A, and 2B).

However, even if one accepts that the transshipment of Chinese exports through Hong Kong is the primary source of the discrepancy in the China’s bilateral trade statistics then one is still left with the question of determining the destination of the earnings from this mis-reported trade. There are three possibilities. First, these earnings from Chinese exports may be repatriated back to China but not reported as such. The failure to report may be a result of defective data collection or an attempt to capture certain subsidies intended for foreign investors. In this case, Hong Kong serves as a way station to disguise the origin of Chinese funds in order to facilitate the returns of these funds to China as "fake foreign" investments or round tripping. (See Huang 2008, pp. 1-10, for a discussion of the motivations of round tripping.)
Second, the fact that the China and Hong Kong trade discrepancies tend to be offsetting may be irrelevant since Chinese portfolio holders may still view Hong Kong as a "foreign" haven for their capital. This confidence that their flight capital in Hong Kong is safe could be based both on China’s commitment to "one country two systems" as well as a more pragmatic view that if the financial independence of Hong Kong is threatened then China portfolio holders with assets in Hong Kong will be able to quickly and efficiently move their funds to another haven at minimal cost. Despite their long history in China, capital controls are still considered very unlikely in Hong Kong especially since Hong Kong lacks the legal justification and procedures to enforce such controls. In fact, the U.S. Drug Enforcement Administration lists Hong Kong as an area where lax financial enforcement allows substantial international money laundering to occur. (Perez et al, 2012, p. 112)

Third, Hong Kong may simply be a way station for capital headed to other countries. The combined China Hong Kong mis-invoicing estimates began to increase following the 1997 reunification. (See Line L on Tables 2A and 2B.) This may reflect reduced confidence that Hong Kong will continue to be a safe haven secured from Chinese authorities.

6. Other Methods of Capital Flight
There are other methods of capital flight that must be excluded from this study since it is difficult to make reliable estimates. In 2015, the Chinese government reduced the amount that could be withdrawn from overseas ATMs by Chinese travelers because of the suspicion that increasingly large individual withdrawals over the last decade represented capital flight and not simply funds for business or tourist travel. (Hewitt 2015, p. 6) Another method of suspected capital flight involves gambling junkets to Macau that increased sharply beginning in 2002. Chinese residents
would pay brokers in China in return for gambling chips for casinos in Macau. It is suspected that a large number of these chips are then converted to cash to be deposited in foreign financial institutions. In early 2015, as part of an anti-corruption campaign, the Chinese government clamped down on gambling junkets and the associated financial transactions. Purchasing insurance polices overseas is another means of evading government capital controls. Premiums can be structured so as to not exceed government limits on foreign currency purchases but holders may cash out policies in Hong Kong or elsewhere. Overseas policies purchased by Chinese increased almost 400% between 2011 and 2014. (Gu 2016)

Although the long-awaited link between the Shanghai and Hong Kong stock markets didn’t occur until late in 2014, it may provide another method of capital flight. While the intention of the link is to encourage foreign portfolio investment in Chinese firms, there appears to be the possibility that Chinese portfolio holders will be able to purchase index fund shares in Hong Kong and later sell those shares and transfer the funds to financial institutions outside China. Possibly concerned about the potential for capital flight, the Chinese government has not only restricted the daily volume of transactions but also retains the right to tax them. (Bloomberg 2014)

IV. PATTERN OF PRC CAPITAL FLIGHT

Since estimating capital flight is fraught with theoretical and practical difficulties, it would give a false sense of accuracy to focus on one measure as "the" measure of capital flight. However, keeping in mind the assumptions that are required, some conclusions concerning the probable range of PRC capital flight during the sample period are possible. Figure 2 shows three estimates of capital flight, an adjusted balance of payments estimate (labeled M) and two
residual estimates. The "low" residual estimate (labeled N) is adjusted using the combined China/Hong Kong mis-invoicing data. The “high” residual estimate (labeled P) is adjusted using only the China mis-invoicing data.

Due to the importance of the mis-invoicing adjustments especially after the imposition of capital controls in 1998, it is likely that the actual level of capital flight from the People's Republic of China is between the “low” and “high” residual estimates. If this is correct then capital flight rose from about $332 billion (plus or minus $60 billion) in 2012, to $425 billion (also plus or minus $60 billion) in 2014. Assuming that net earnings of flight capital since 1984 was just sufficient to offset dollar inflation then the accumulated PRC capital flight is approximately $3.2 trillion - $3,200 billion - (plus or minus $1.0 trillion) with over half of this flight occurring in the most recent six years.

Figure 2: Adjusted Capital Flight Measures (billions of $)
It might be useful to compare both the flow and stock of PRC capital flight to other Chinese economic variables in order to get a sense of scale. The estimated $425 billion (plus or minus $60 billion) of capital flight in 2014 was equal to about 17% of China’s total exports of goods and services and roughly 195% of the country’s current account balance in that year.

Another comparison, emphasized by Cai (1999), is the ratio of capital flight to inward foreign direct investment. In 2014, this ratio was 165%! In other words, outward capital flight that year was larger than the inward foreign direct investment (FDI) of $257 billion. (Note that $257 billion is gross FDI while the $158 billion shown on Table 1 is net FDI.) In fact, capital flight from the PRC was greater than inward FDI for every year of the last decade.

With respect to the scale of the accumulated flight capital, the estimated 1984-2014 accumulated flight capital of roughly $3.2 trillion was equivalent to about 80% of the country’s international reserves, which were $3.9 trillion at the end of 2014. Another possibility is to compare it to the level of PRC foreign debt. This ratio has changed little over the last decade and was an estimated 335% at the end of 2014.

V. EXCHANGE RATES, POLITICS, AND CAPITAL CONTROLS

What explains the rapid acceleration of capital flight since 2005? Previously, it appeared that inappropriate exchange rates, political uncertainty, capital controls, and changes in the unique role of Hong Kong were the major determinants Chinese capital flight. (Gunter 2004 and 1998) In view of the new data and the greater internationalization of the Chinese economy, these explanations must be reconsidered.

One of the most widely accepted causes of capital flight is exchange rate overvaluation. If portfolio holders expect devaluation then they have a strong incentive to arrange for at least
part of their holdings to be shifted to another currency in order to profit from the expected depreciation. Based on the gap between the official and black market exchange rates, one could make the argument that the RMB was overvalued through most of the 1980s and the 1990s. Although, there was a substantial devaluation – almost 33% - of the official RMB rate in 1990, this devaluation did not completely close the gap between the official and black market rates. Overvaluation is consistent with capital flight and, as can be seen in Figure 2, such flight grew substantially through the 1990s. However, despite the Asian Financial Crisis of 1997, China resisted any further devaluation and the RMB continued to trade at 8.3 RMB/$ on the official market until 2005 when the government orchestrated a series of appreciations resulting in an exchange rate of 6.8 RMB/$ in 2010 and 6.14 RMB/$ in 2014. However, this 26% appreciation was accompanied by an acceleration of capital flight as estimated by the residual measure – the opposite of the prediction.

Increases in economic or political uncertainty can lead to increased capital flight. Directly, increases in uncertainty reduce the expected risk adjusted return on domestic investments. Lower expected domestic returns relative to foreign assets will lead to a capital outflow. Indirectly, increases in uncertainty tend to lead to delays in investment and consumption as a result of decreased planning horizons. These delays can lead to domestic economic slowdowns that again lead portfolio holders to shift their assets to a foreign sanctuary. (Bloom 2014, pp. 163-166; Gunter 1994, pp. 24-32)

Institutional Investor’s twice a year listing of country risk provides an external evaluation of the political and economic risk facing investors in China. Ratings are based on a country’s debt service record, political outlook, economic outlook, financial reserves and current account, and several macroeconomic and financial measures. (Coplin and O'Leary 1994, p. 138) From the
first *Institutional Investor’s* rating of China in 1984 until 1989, the country was considered one of the 25 best countries in the world for FDI. However, after Tiananmen Square, both China’s ratings and its international ranking dropped sharply for almost a decade and a half. In fact, it wasn’t until 2004 that the country’s rating exceeded the Pre-Tiananmen value of 62.9, which made it the 38th best country for FDI. Since 2004, its rating and ranking have steadily improved reaching a rating of 75.9 – 26th – in 2014.

Comparing China's capital flight and its economic and political risk rating fail to show the expected inverse relationship. The annual rate of growth of Chinese capital flight was about the same (22-23%) before and after the collapse in the country's credit rating in 1989-1990. More recently, the improvement of China’s ratings since 2004 has been accompanied by a substantial increase in capital flight, again the opposite of the standard prediction.

China’s capital controls are complex and executed by several different Chinese institutions. Even a short summary of existing controls requires six pages. (See Lin and Schramm 2003, Table 6, pp. 272-277.) Therefore any announced relaxation or tightening of capital controls tends to be a matter of degree. At the same time that certain transactions are liberalized, other restrictions are maintained or even tightened. However, from 1978 through 1998, there was perceived to be a gradual weakening of Chinese capital and exchange controls. One benefit of relaxing capital controls was to decrease the pressure on the RMB to appreciate as a result of China’s large current account surplus and inward FDI. To further reduce appreciation pressure, China’s Central Bank continued to engage in large purchases foreign currencies, which, of course, increased the country’s international reserves. (Economist 2013a) However, the relaxation of capital controls facilitated capital flight through the financial sector and, in late
1998, China substantially tightened controls on capital and money market instruments. The rigor of these capital controls remained roughly unchanged through 2009.

Capital controls, to the extent that they increase the transaction costs associated with holding foreign assets or decrease the return on such assets should reduce capital flight. However, there are indirect effects that may result in an increase in capital flight or at least a decrease in the repatriation of flight capital. (Gunter 1994, pp. 73-77.)

First, the imposition of capital controls may be taken as a signal that the government intends to adopt new fiscal or monetary policies that will injure Chinese businesspersons or portfolio holders. A second way in which capital controls may exacerbate capital flight is by reducing flight capital repatriation. A strengthening of capital controls may reduce repatriation by increasing the penalty of guessing "wrong" about the economy's future. The holder of foreign assets realizes that if she repatriates her flight capital this month and realizes next month that she has made a mistake then sending her funds back abroad will be more difficult. In other words, tightening of capital controls may "maroon" flight capital abroad. Finally, the reporting requirements, enforcement procedures, and bureaucratic influence required by tougher capital controls may reduce the efficiency of Chinese firms increasing the incentives for capital flight. (Gu and Yap 2016)

The effect of the 1998 capital controls on Chinese capital flight was surprisingly straightforward. In the long-run, imposing stricter capital controls on the international transactions of Chinese banking and other financial intermediaries changed the preferred route of capital flight without substantially reducing the volume. As can be seen in Figure 2 and Tables 2A and 2B, capital flight estimated according to the balance of payments method (Line M), which is dominated by financial transactions, fell sharply in 1999 – when the new controls were
imposed – and continued low until the loosening of capital controls almost a decade later. However, capital flight as measured by the more inclusive residual measure not only had a smaller decline but also a more rapid recovery to pre-control levels. This divergence between the balance of payments and the residual measures widened until 2009 when the government began to partially relax capital controls as part of its effort to internationalize the RMB. (Economist 2013b, p. 76)

The acceleration of Chinese capital flight from 2005 to the end of the sample period in 2014 does not appear to be caused by an overvalued exchange rate, an increase in economic/political uncertainty, or the relaxation of capital controls. Therefore, alternative explanations should be considered such as that PRC capital flight represents the fruits of corruption, is an example of Dornbusch’s “low level capital flight”, or is motivated by a desire of Chinese families to migrate.

VI CORRUPTION, TRANSACTION COSTS, AND MIGRATION MOTIVATED CAPITAL FLIGHT

Since 2000, the Chinese government has made little progress is improving its reputation for integrity. Corruption, the use of public power for private gain, is difficult to measure but standard sources such as Transparency International show little change in perceived corruption in China. Of course, capital flight may increase during periods of “stable” corruption if either the corrupt have more illicit funds to hide or are more interested in foreign sanctuaries to hide their illicit funds. There is evidence to support both these possibilities. Since the beginning of the liberalization of the Chinese economy in the late 1970s there has been a sharp increase in income inequality. In a single generation, China has transitioned from one of the most equalitarian states
in the world to one of the most unequal. By 2012, a private estimate of the China’s Gini coefficient reached 0.61 (1 represents complete inequality). (Osnos, 2014, p. 268) For comparison, the U.S. Gini coefficient is less than 0.45. In an extensive investigation of wealth concentration, Shih estimated that the top 1% of urban households (0.4% of the Chinese population) control between $2 trillion and $5 trillion. (2011, p. 23) It has been estimated that the 100 richest persons in China are collectively worth over $300 billion. (Ball 2014) As a result, there is a growing number of rich Chinese that may choose to hide their wealth abroad. (Kar and Freitas 2012, p. 1)

How much of this wealth is ill-gotten is difficult to estimate but it is believed that the origin of many recent fortunes in China is from legally ambiguous sources. One piece of evidence is that many newly rich persons are closely related to high government officials. (Ball 2014; Gilley 2001, pp. 59-60) Concern that this wealth might be confiscated during the next Chinese government anti-corruption campaign can be an important motive for capital flight. In 2011, the Central Bank estimated that over the two previous decades, about 18,000 officials had fled the country with an estimated $120 billion. (Osnos 2014, p. 244)

In addition to corruption, an unusual pattern of transaction costs may also have contributed to the acceleration of capital flight. (Sharman 2012) Purely as an attempt at portfolio diversification, Chinese capital flight is somewhat of a mystery. As a developing country, it would be expected that the return on capital would be greater in China than in one of the developed states or international financial centers. Also, China is a big economy; its GDP today is greater than that of the entire world economy of just seventy-five years ago. And with over a billion people spread out over a large geographically diverse country engaged in a wide variety
of economic activities, why can’t any demand for portfolio diversification be met inside the country?

In the case of countries with well-developed financial markets, transaction costs generally account for only a small fraction of the value of a financial transaction. In addition, for well-developed markets, the transaction costs associated with international transactions are usually higher than those associated with domestic transactions. (See Gunter 1994 for a more extensive discussion.) However, portfolio holders in the People's Republic of China appear to face a situation where not only are 1) the transaction costs associated with domestic financial activities substantial but also 2) the domestic costs are greater than those associated with equivalent international financial transactions. In other words, the transaction costs for a Chinese portfolio holder to purchase a diversified portfolio of common stock on the Shanghai Stock Exchange are probably higher than the transaction costs for the same Chinese person to purchase a diversified portfolio of common stock on the New York Stock Exchange.

There are several reasons for the high level of financial transaction costs in China’s financial markets. First, there is the high cost of missing, incomplete or confusing legislation on firm management and finance. (Roache and Maziad 2013, p. 111; Allen et al 2005, pp. 64-67) Second, accompanying the lack of rules are severe failings in accounting and auditing making it difficult or impossible to obtain information on ownership, revenues, expenses, and balance sheets of Chinese corporations. (Aubin and Lynch 2013; Lee et al 2013, pp. 5-6) During the sample period, China lacked both generally accepted accounting procedures and an independent auditing function to assure the public that data is reliable. (Allen et al 2005, p. 70; Huang 2008, pp. 10-12) Finally, there are substantial transaction costs associated with enforcing financial agreements. Chinese commercial law and the necessary body of procedures to enforce it are in
their infancy. And there are few skilled practitioners – only one fifth of all lawyers have law degrees. (Allen et al 2005, p. 67) Adding to the lack of confidence in the agreement enforcement process is the widely held belief that the courts are often corrupt and biased.

The scale of either inward or outward foreign direct investment can also affect the transaction costs of capital flight. China is currently experiencing large-scale inward foreign direct investment (FDI), outward FDI (OFDI), and capital flight. According to the investment-climate theory, capital flight is determined by the relative return on foreign and domestic assets. If the expected return on foreign assets increases relative to that on domestic assets then one would expect both an increase in capital flight and a decrease in FDI. This is inconsistent with the Chinese situation over the last decade where there have been increases in both inward FDI and outward capital flight.

An alternative explanation, the discriminatory-treatment theory, emphasizes that countries often discriminate in favor of foreign investors. This discriminatory-treatment theory could provide an explanation of how a country might experience both large-scale capital flight and FDI. (Kant 1996, pp. 11-15) Sicular (1998) when she examined the seeming contradiction between China simultaneously being the recipient of large-scale foreign direct investment and experiencing substantial capital flight, concluded that the explanation lay in the "...differential between returns to domestic and foreign investors..." (p. 601)

Another possibility is that FDI and OFDI may reduce the transaction costs involved with capital flight. Perez et al argue that the foreign investment decisions may be motivated, in part, by whether such investment will facilitate capital flight e.g. there would be greater tendency to invest in countries that are known to have weak financial regulatory regimes. (2012, p. 118-120) In addition, the involvement of a Chinese individual or firm in either being the recipient of FDI
or the source of OFDI tends to reduce the transaction costs of capital flight by providing general information, specific contacts, and access to transactions that can be used to facilitate capital flight. (Perez et al, 2012, pp. 111-112) If either FDI or OFDI facilitates capital flight then it is likely that there will be a hysteretic effect. While an increase in either FDI or OFDI tends to lead to increased capital flight, a decrease in FDI or OFDI may have little impact on capital flight since the information gained and contacts made will not immediately lose their usefulness.

A final possible explanation is that the acceleration of capital flight over the last decade is motivated by a desire to migrate. For educational, economic, political, social, or environmental reasons; many members of China’s middle and upper class are sending funds abroad in excess of the legal limit of $50,000 a year. (Hewitt 2015) For many Chinese families, this capital flight is part of long-term efforts to move “their children, their money, themselves” permanently out of China. (China Daily 2011, Browne 2014) A survey showed that about 60% of rich Chinese (each with more than $9.4 million in assets) intended to migrate from China - mostly to the United States or Canada. And these Chinese already have moved an estimated 20% of their total assets out of the country. (Shi and Yu 2011) It can be expected as a result of a slowing economy and rapidly deteriorating environment that the migration motivation for capital flight will strengthen in the future.

**VII. CONCLUSIONS**

Assuming that net earnings of this flight capital was just sufficient to offset dollar inflation then the accumulated PRC capital flight since 1984 is $3.2 trillion (plus or minus $1.0 trillion); about $105 billion a year during the last three decades. And the pace has accelerated
since 2005 with capital flight reaching $367 billion in 2013 and $425 billion in 2014 (both estimates are plus or minus $60 billion).

The preferred routes for Chinese capital flight changed during the sample period. From 1984 until the 1999 imposition of capital controls, financial transactions played an important role in such flight. For the next decade, capital flight by trade mis-invoicing dominated. However, beginning in about 2012, there was increasing use of private foreign bank borrowing by Chinese individuals and organizations as a capital flight route. The imposition of capital controls appears to have little long-term impact on the volume of capital flight – such controls only influence the preferred route.

There has also been a change in the motivations for capital flight. Early in the sample period, ‘traditional’ explanations such as overvalued exchange rates, rising political uncertainty, capital controls – at least in the short-run – and the unique role of Hong Kong appear to have had explanatory value. However, from 2005 through 2014, China experienced an appreciating currency, improved economic and political stability, and no relaxation of capital controls and yet capital flight accelerated. Possible causes are the effects of corruption and rising income inequality, the unusual pattern of investment transaction costs, and migration motivated capital flight as more middle class Chinese seek to move ‘their children, their money, themselves’ out of the country.

Capital flight of the scale experienced over the last decade is probably unsustainable especially if it represents the fruits of corruption. In addition to the adverse economic effects including reduced government revenues, loss of capital resulting in slower economic growth, and higher foreign debt; capital flight of this scale represents an implicit criticism of the Chinese authorities’ management of the economy. These authorities now face a serious dilemma if it
wants to prevent a further acceleration of capital flight in the country’s half-open economy.

Either there can be a return to detailed government control of all international trade and financial transactions, which will lead to a further slowdown in the economy with only a limited effect on capital flight. Or the authorities can aggressively move to liberalize both the domestic and foreign economies of China in order to make the country a more desirable place to live and invest. Either choice will have serious political consequences.

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