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A Firm-level Piece in China's Exchange Rate Determination Puzzle

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1.0 Introduction

The level and behaviour of China's exchange rate has been a subject of intense international interest. Widely viewed as being undervalued, the level of the renminbi has been cited as a key cause of global imbalances (see, for example, Goldstein and Lardy 2009). Yet the determinants of China's exchange rate policies, and why the renminbi has followed the particular path that is has, remain contested. Two broad classes of studies can be identified which analyse, respectively, the international and domestic determinants of exchange rate policy. The former have thus far failed to find any significant impact of foreign pressures on exchange rate behaviour. (See, for example, Ramirez, 2011; Liu at al 2008). The latter, however, have identified a number of factors important in determining exchange rate policy but there remains debate over exactly which factors are the most important and exactly how they affect decision-making. This paper contributes to the debate over the role of domestic political economy factors in the determination of China's exchange rate policies.

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This controversy over the domestic drivers of exchange rate policy, surveyed below in section 2, centres on the extent to which, and the channels through which, "interest groups" and exporters in particular, have an influence on exchange rate policy determination. We add a further piece to this puzzle by considering evidence gained through in-depth interviews with a sample of exporting firms in Jiangsu province. As China's second largest exporting province, if "export interests" do have a role to play in exchange rate policy determination we might expect to find it here. Based on the firm interviews we are able to disaggregate these "export interests" and show how different firms are affected by the level of the renminbi and, in particular, renminbi appreciation. We also document how these affects are communicated to, and collected by, provincial and central Ministries and institutions. By so doing, we are able to better understand what constitutes "export interests" and how these interests feed into domestic policy-making decisions.

Following the review of the literature in section 2, we provide a brief introduction to the Jiangsu economy in section 3. This is followed by a description of five exporting firms used as the case study in section 4. We present an analysis of our findings in section 5. Our findings broadly support those analyses of exchange rate determination which point to the relatively limited role of "interest groups" in policy formation, and to the importance of institutions and central policy choices.

2.0 The Puzzle: Political Economy Explanations of Exchange Rate Policy

China's exchange rate policy has undergone change over the past two decades. From 1995 until 2005 China operated a de facto currency peg against the U.S. dollar. This fixed exchange rate decade was followed in July 2005 with the announcement of the transition to a managed float. The bands of the float were widened in 2007 and the speed of renminbi appreciation increased until mid 2008 when a dollar peg was re-instituted. This came to an end in September 2010 when a managed float was again adopted and the renminbi continued to appreciate. This brief history is shown in Figure 1 below.



Source: Pacific Exchange Rate Service

Exchange rate policy has therefore varied over time with different regimes in effect at different periods. For many though, both inside and outside of China, (see, for example, Goldstein and Lardy 2009; Yu 2010; although see also Qin and He 2011) the changes over time have not been large enough to adequately address the renminbi's overvaluation and China's associated trade surpluses and foreign exchange reserves levels. An explanation is required, therefore, of both why exchange rate policy has changed over time and why it hasn't changed faster.

In seeking an explanation, there are political economy models of exchange rate policy determination available. However, their application to China has been disputed. We start by reviewing one the most influential political economy explanations of exchange rate determination, that provided by the work of Frieden (1991, 1994, 2001, 2005, 2010 for example), and its application to China.

Frieden posits that the strength of interest groups will determine which exchange rate regime is most likely to prevail. His models typically distinguish between tradable and non-tradable producers, export-oriented and import-competing sectors and the tradablesectors and international investors (see 1994: 85 for example). The exact specification of interests differs by context and initial assumptions but some common themes are that the manufacturing and tradable goods sectors typically favour a flexible exchange rate regime while international investors typically favour fixed rates; political openness is also typically related to fixed exchange rates.

Such a model might be viewed as an unpromising starting point for explaining China's preference for a fixed exchange rate during much of the past of two decades and a strictly managed float at other periods given China's large manufacturing sector as well its lack of political openness which, *ceteris paribus*, would predict a policy preference for a flexible exchange rate regime. Nevertheless, Kaplan (2006) finds the Frieden model useful in explaining the Chinese case if suitably modified and extended. The modification requires taking into account initial conditions and, in particular, the level of the exchange

rate. Frieden's analysis was primarily based upon Latin American countries' experience where overvalued exchange rates were the norm and where the manufacturing and other tradable goods sectors pushed for the abandonment of the fixed rate regime in the expectation of a depreciation and enhancement of their competitiveness.² In countries where the exchange rate is undervalued, in contrast, Kaplan points out that a move to a more flexible rate would be expected to lead a currency appreciation and hence a loss of export competitiveness; in this situation the export and tradable goods sectors in general would argue for maintenance of the currency peg. This is the case in China, according to Kaplan (2006: 1194-1195) who argues that "the Chinese government's strong commitment to the undervalued currency likely reflects the power and influence of the country's regional coastal governments and by extension, the country's manufacturing sector. Similar to Frieden's model, wealth equals political influence. However, in contrast to Freiden's Latin American cases, the undervalued exchange rate compels these groups to pressure the government to maintain, rather than abandon the currency peg."

The extension to Frieden's model proposed by Kaplan is to include the government as an actor with interests in its own right rather than, as in Frieden's analysis, the neutral reflection of societal pressures. Elite preferences in China are defined as the Communist Party's "preoccupation with employment and social stability." (ibid. 1193) Since the Communist Party has adopted an export-oriented growth path in which the export sector is the provider of jobs to millions migrant rural inhabitants and displaced state-owned enterprise workers, then maintaining export growth is clearly in the central

 $^{^{2}}$ Freiden also applied his theory to the early US and to the EU (1994) and Eastern Europe (2010).

government's interests. This would explain its reluctance to allow the exchange rate to appreciate to its market level and its "strong commitment to the undervalued currency." (ibid. 1193).

Kaplan's thesis has the merit of placing China within the broader political economy literature on exchange rate determination and modifying and extending the latter to allow China's inclusion. It is also appealing in explaining Kaplan's main historical question, namely, why the Chinese leadership resisted pressures to allow the renminbi to appreciate in the first half of the 2000s. However, Kaplan provides no explanation why the authorities decided not to devalue the renminbi in the wake of the Asian Financial Crisis when the politically powerful export sector would have benefited from such a policy. If these latter forces were so powerful in the early-mid 2000s why were they less so in late 1990s? The post-2005 appreciation of the renminbi is also difficult (although perhaps not entirely impossible) to fit within this framework. Furthermore, the decision, in July 2008, to re-peg to the US dollar, rather than to a currency basket, at a time when the dollar was appreciating against other major currencies is also difficult to explain if exporters' interests are paramount. Having a basket peg would have led, at least in the first stages of the Global Financial Crisis, to a depreciation of the renminbi against the dollar and increased competitiveness for China's export manufacturers. This suggests that something is still missing in the Kaplan-Frieden model.

Steinberg and Shih (2012) have taken up this challenge. They address the political determinants of exchange rate policy in China and argue that, similar to Kaplan, interest groups do have influence on policy-making in authoritarian regimes but add some

important caveats. They argue that interest groups representing the tradable goods sector do support undervalued exchange rates but do so as a "policy of last resort" (2012: 2) when other compensatory policies are not available. In China's context thesecompensatory policies include expansionary macroeconomic policy and export tax rebates. That is, the range of policies available to China's policy-makers includes instruments, such as export tax rebates, that enable political interest groups such as exporters to be recipients of government favour but without this necessarily involving a change of exchange rate policy. This insight, also developed in Bowles and Wang (2006), points to the complexity of China's policy mix and the need to take account of a range of policy instruments available to China's policy makers when making exchange rate decisions.

However, Steinberg and Shih also provide a strong argument for including interest groups in the determination of exchange rate policy in China even if the exercise of interest group pressure depends on contextual (i.e. compensatory) factors other than the level of the exchange rate. They argue that "interest groups exert a much stronger influence on exchange rate policy in authoritarian regimes than has previously been recognized" and that "interest groups influence autocrats's exchange rate policy because they have plenty of opportunities to communicate their preferences to decision makers. Furthermore, autocrats, out of concern for their political survival, take into consideration the preferences of private firms. Interest groups influence autocrats' exchange rate policy as a result of this combination of access and accountability." (2012: 6).

The mechanism for the exercise of interest group pressure runs as follows in their account (see 2012: 9-10). Private firms and industry associations express their

preferences to local governments (or bureaucracies) and these lower level officials then advocate on behalf of these firms/industries thereby supporting the economic base that determines their political advancement. These interests are then communicated up the hierarchical ladder and ultimately influence the exchange rate decisions by senior autocrats.

Bringing these two parts of the argument together – that the tradable goods sector can influence exchange rate policy but only exercises it when other instruments are unavailable - Steinberg and Shih use this to explain China's recent exchange rate history. That is, the renminbi was kept stable until 2005 despite burgeoning trade surplus because of the power of the tradable goods sector. Appreciation followed in 2006-7 as exporters were indifferent to the change of exchange rate policy since they were compensated through expansionary macroeconomic policy and export tax rebates, but became increasingly concerned with the pace of appreciation thereafter resulting in the re-peg to the US dollar in mid-2008. Their research, based on interviews, concludes that the interest group explanation for exchange rate policy is strong and that "there is surprisingly little evidence that leaders' ideology or foreign policy interests influence Chinese exchange rate policy" (2012: 23). Domestic "policy coalitions" between firms and government officials (2012: 9) emerge as the key determinant of China's exchange rate policy.

The end of exchange rate appreciation in 2008 is also attributed to exporters' interests by Breslin (2010) although he posits a more direct channel of influence (also discussed by Steinberg and Shih). He argues that "by the summer of 2008, low value-added processing exporters were laying off workers and closing down factories and it is

notable that China's top leaders all visited the coastal provinces with the greatest concentration of export industries over that summer – Hu Jintao went to Shandong, while Wen Jiabao and other central leaders visited Guangdong, Zhejiang, Jiangsu and Shanghai. The result was that, just over a year after cutting tax rebates and after a series of meetings of top officials in Beijing, the policy was partially reversed and some rebates restored in July 2008. The leadership also cut back on currency appreciation, and adjusted other policies in an attempt to restore some of the support for exporters that had previously been withdrawn." (See also Naughton 2008).

While Kaplan and Steinberg and Shih can be seen as extending and modifying Frieden's model for applicability to China, others argue that the model is best abandoned and replaced. Liew and Wu (2007) provide a good example. For them, the Frieden model, relying as it does on the ability of interest groups to influence government policy, is not transferrable to China. They argue (2007: 23) that Frieden's "approach cannot ... explain exchange rate policies in non-market economies nor in a country that does not have a well-developed civil society with political space." As support for the absence of active civil society they document that they did not find a single article in any national or key sub-national export-dependent provincial newspaper which questioned China's 'no devaluation' policy during the months at the height of the Asian Financial Crisis. With a weak civil society and a state-controlled media, the scope for interest group contestation of exchange rate policy is severely restricted.

Liew and Wu suggest that we need to look elsewhere, to the policymaking structure, the composition of key committees and the backgrounds of its members, and to institutional actors which control information flows to the key committees. It is the

Party's powerful Central Leading Group on Financial and Economic Affairs (CLGFE) and its composition is crucial to understanding the outcomes of exchange rate decisions. However, the CLGFE depends on analysis provided by the Leading Group and other key policymaking organs (specifically the Office of the Leading Group and its research unit, the State Council Research Office, the former State Council Office for Reform of the Economic Structure, and select university-based policy research centers), and inputs from key economic ministries, specifically the People's Bank of China (especially its Monetary Affairs Committee and Monetary Policy Department), the National Development and Reform Commission (the former State Planning Commission), Ministry of Finance and Ministry of Commerce. (See Chin forthcoming for elaboration).

Liew and Wu argue that both the no-devaluation policy decision during the AFC and the 2005 decision to discontinue the RMB-dollar peg were shaped by the bureaucratic rank of major policy organs, their policy preferences, and the influence of key individual policymakers who have to operate within given national economic constraints. It is therefore in the specificities of China's political system, and in elite committee composition that we should look for explanations of exchange rate policy rather than in interests in the broader political economy.

Thus, the changes in organizational structure which occurred in 2003 with the new Hu - Wen leadership are used to explain how different influences were brought to bear and which led to the abandonment of the dollar peg in 2005. The explanation which Liew and Wu give for this particular policy change runs as follows. They argue (2007: 206) that "there is without a doubt a fundamental shift in emphasis between the Jiang Zemin-Zhu Rongji and the Hu Jintao-Wen Jiabao leadership. While the former leadership

was deeply concerned with engaging the global economy, the latter is more concerned with poverty and income inequality, especially in the countryside and western China." The rising levels of income inequality and rural protest have meant that "Hu, Wen and other senior party leaders have recognized that globalization-generated economic growth alone will not keep the CCP in power. This realization is reflected in the reconfiguration of China's exchange rate policymaking structure that is manifested in the renewed influence of the restructured and renamed [National Development Reform Commission] and the appointment of a number of party leaders as members of the CLGFE and officials to important positions in the CLGFE administrative office who, from our brief descriptions of the backgrounds earlier, are clearly strong advocates for the rural sector and poor western regions. Hu Jintao himself was at one time party secretary of the poor autonomous region of Tibet and has been actively promoting many of his protégés with long periods of service in the poor northwestern regions – members of the so-called Northwest Faction – to top party positions." (2007: 207).

The upshot of this is that when the CLGFE came to decide on exchange rate policy, representatives from the export sector and coastal regions were much less influential within the CLGFE which reduced the opposition to abandoning the peg. The decision to move to a managed float rather than a free float was taken in order to lessen the adverse impact on agriculture and the state sector of cheaper imports, but at the same time introduced some market elements into exchange rate determination which gave the People's Bank some degree of monetary independence to tackle the inflationary pressures which threatened social stability.

The explanation for the change in exchange rate regime in 2005 is summed up by Liew and Wu (2007: 209) as follows: "In examining China's decision to discontinue the renminbi-US dollar peg and replace it with a managed float exchange rate it is clear that, while institutional interests and personal backgrounds were important, what was pivotal was the fear among senior party leaders of social instability from poverty and income inequality in the countryside and high inflation." Thus, even institutional interests took a back seat to the imperatives of economic policy change necessary to address rising inequality and inflation. This provides a contrast to the Steinber and Shih account for whom domestic interest groups, rather than economic policy trade-offs, are the critical factor.

The Liew and Wu account does has the advantage of analyzing the institutional specificities of Chinese policy making and provides a detailed examination of its constituent parts and shifting structures and memberships; their highlighting of the renewed importance of the National Development and Reform Commission is especially valuable. These institutional features and dynamics are also important in the Steinberg and Shih (2012) account. However, while the latter stress the multitude of ways in which pressures are brought to bear on decision-making from outside of central structures – and focus attention on "one type of interest group – private firms – because their influence in autocracies has been undertheorized" (2012: 7) – the Liew and Wu (2007) analysis argues that elite decision-making in China is an even more narrow and closed process than elsewhere.

Liew and Wu's analysis is plausible in viewing the move to a more flexible exchange rate as an outcome of policy makers seeking better inflation control. The

People's Bank had to perform large sterilization operations in the years leading up to the 2005 decision – 110 operations alone in 2004³ - as a result of the rising trade surplus. It should be noted, however, that the inflation rate in 2004, although the highest since 1997, was still only 3.9 per cent and fell to 1.8 per cent in 2005. Furthermore, the appreciation of the renminbi adversely affected agriculture by lowering the price of imported agricultural commodities and so it is not clear how this fits in with the pro-rural strategy which Liew and Wu correctly attribute to the Hu-Wen leadership. The slow pace of exchange rate reform is also difficult to explain using this framework with Steinberg and Shih (2012: 17-18) noting that, even though the Hu-Wen leadership's position was more supportive of an overvalued rather than an undervalued exchange rate, the "lack of substantial appreciation during their first 5 years in power suggests that China's top leaders cannot choose policies based on their own independent ideas and preferences."

This review of the existing explanations on the political determinants of China's exchange rate policy raises a number of analytical and empirical issues. The first concerns the existence of a coherent set of interests for the "tradable goods" sector. As we have seen, this is necessary for the interest group analyses advanced by Kaplan and Steinberg and Shih adopting a Frieden type model. China's large export-oriented manufacturing sector might be thought of as having clearly defined interests when it comes to the exchange rate. However, this sector is heterogeneous and while Steinberg and Shih do hint at the complexity of the interests arising from it given the large role that the processing trade plays in China's exports they do not explore this further. Economic theory would suggest that these complexities are important in determining the impacts of

³ Burdekin and Siklos (2008).

exchange rate changes on different types of exporting firms and a further analysis of this is warranted.

The second issue concerns when, and the extent to which, private firms are able to communicate their preferences to local officials and what impact these local officials have on influencing decisions taken at the centre. As we have seen both Kaplan and Steinberg and Shih attribute a strong role to these channels although Steinberg and Shih argue that such channels are only used when other compensatory policies are not available and this point is worthy of further verification. In contrast, Liew and Wu are more disposed to the policy insulation account of decision-making in authoritarian regimes which ascribes only a very limited role to actors outside of the central decision-making institutions. This point is also worthy of further investigation since, while Steinberg and Shih provide extensive evidence from interviews with officials and private sector actors, they do not refer directly to evidence from private firms although do refer to reports of the activities of the Zhejiang Merchants' Association, for example, as well as on secondary literature on business lobbying more generally (e.g. Deng and Kennedy 2010).

The third issue is the relative roles played by exporters' interests, however expressed, relative to other factors such as national policy frameworks and economic policy trade-offs. Steinberg and Shih, and Kaplan, view the interests as exporters the main explanatory factor whereas Liew and Wu view even the institutional interests which they do identify as of secondary importance to other policy objectives such as inflation control and inequality reduction.

As a way adding one more piece to this puzzle, in this paper we take up these three issues by examining five exporting enterprises in Jiangsu province. Jiangsu is China's major exporting province and so evidence of the influence of private firms might be expected to be important here. Obviously, a sample of five enterprises has its limitations in terms of being able to draw national conclusions and it is not possible to get at all of the issues at dispute in the literature surveyed above. However, in-depth interviews with firms selected with different ownership patters, from different sectors and of different sizes, do provide the micro level data with which to test the theories outlined above which typically operate at higher levels of analysis and which do not incorporate firm level information even though their explanations of exchange rate determination posit specific roles to firms.

We discuss the extent to which the firms are all affected by exchange rate changes in the same way, and hence the extent to which a coherent export interest group exists. We analyse how they adapted to exchange rate changes and what roles they have played in the information flows from this local level into the exchange rate decision making process at the centre. We are also able to examine how specific policies, such as export tax rebates, affect the firms as well as any impacts of national policy frameworks. The limitations of our sample mean that this paper can only provide a piece to the exchange rate determination puzzle but we believe that it is one that has been missing so far. We start by providing a brief overview of Jiangsu's export sector.

3.0 Jiangsu Province

The province of Jiangsu provides the location for our case study. Jiangsu is China's second largest province in terms of GDP, accounting for over 10 per cent of the

national total. Jiangsu is also one of China's most trade intensive provinces and is the second largest province in terms of export value behind Guangdong; Jiangsu's share of China's exports was 16.5 per cent in 2011 as shown in Table 1 below.

	China (US\$ billions)	Jiangsu (US\$ billions)	Jiangsu's share (%)
2001	266.10	28.88	10.9
2002	325.60	38.48	11.8
2003	438.23	59.14	13.5
2004	593.33	87.56	14.8
2005	761.95	122.98	16.1
2006	968.98	160.42	16.6
2007	1220.46	203.72	16.7
2008	1430.69	238.04	16.6
2009	1201.61	199.24	16.6
2010	1577.75	270.55	17.1
2011	1898.60	312.62	16.5

Table 1: Jiangsu's Share of China's Total Exports 2001-2011

Source: Statistical Yearbook of China and Statistical Bulletin of Jiangsu National Economic and Social Development, various years.

Exports are comprised of two main categories, the processing trade and general trade. The former consists of exports which are manufactured in China using predominantly imported materials while the general trade comprises goods manufactured in China for export but using domestic materials. In dollar terms, both categories of trade have increased approximately tenfold over the past decade with the processing trade being the largest of the two components as shown below in Table 2.

Table 2: Jiangsu's Exports from the Processing Trade and General Trade, 2001-2012

	General Trade (US\$ billions)	Processing Trade (US\$ billions)	Processing Trade as a percentage of Total Processing + General Trade
2001	13.65	15.21	52.7
2002	17.18	21.26	55.3
2003	22.48	36.59	61.9

2004	30.49	56.96	65.1
2005	40.63	82.05	66.9
2006	53.15	106.13	66.6
2007	70.53	130.56	64.9
2008	92.01	141.97	60.7
2009	70.89	122.65	63.4
2010	98.93	159.81	61.8
2011	126.24	172.18	57.7
2012	64.02	80.27	55.6
(Jan-			
June)			

Source: Statistical Yearbook of China and Statistical Bulletin of Jiangsu National Economic and Social Development, various years.

In terms of the firms producing these exports, joint ventures and foreign enterprises have taken the largest share of Jiangsu exports as shown in Table 3. Since accession to the WTO, the joint venture and foreign enterprise share has increased from 56.8% in 2001 to 70.3% in 2011. As well as the changed legal provisions provided by WTO membership, these enterprises have been encouraged by the Jiangsu provincial government as part of its strategy of encouraging leading firms, spillover effects, and the building of local supply chains.

	Joint-venture and foreign	Private enterprises	State-owned enterprise
	enterprises		
2001	13.65	0.27	10.11
2002	24.25	1.01	10.73
2003	41.12	2.42	12.19
2004	65.22	5.68	12.85
2005	94.23	10.13	14.37
2006	123.62	16.53	15.79
2007	155.63	25.44	17.75
2008	174.96	35.06	20.79
2009	146.64	31.18	17.38
2010	192.32	48.34	24.32

Table 3: Jiangsu's Exports by Enterprise Ownership Category (US\$ billions)

2011	215.21	64.54	26.51
Sour	ce: Statistical Yearbook of China and S	Statistical Bulletin of Ji	iangsu National Economic

and Social Development, various years.

This data shows the importance of Jiangsu as an export province but also the complexity of the export structure with both general and processing trade significant and with exports coming from enterprises in different ownership categories. With respect to the latter, joint ventures and foreign owned enterprises have increased their export volumes by over fifteen-fold since 2001 while those of state owned enterprises have increased only two-and-half fold. Private enterprises' exports have shown the most rapid rate of growth and are now valued at more than double state-owned enterprise exports. If we are to understand the "export lobby", this diversity of types of export trade and ownership categories needs to be considered further and we turn to this in our case studies.

4.0 Case Studies

This section provides a brief overview of five exporting companies highlighting their experience of, and attitudes towards, China's exchange rate policies and of renminbi appreciation since 2005 in particular. We document the ways in which their experience has fed into information flows. All five companies are based in export and technological industrial zones managed by municipal governments. They are based in three separate municipalities and operate in five different sectors. We provide a brief overview of their number of years of operation, main products and export markets, size as measured by number of employees before turning to their accounts of their experience with exchange rate policies. Information was provided in in-depth interviews conducted in June 2012 with the firms' general managers, often with other input provided by marketing and/or accounting staff.

Firm A

A major electronics firm, this company is 100% owned by a foreign East Asian firm. It employs 13,000 workers and has a 12% share of the global market for its product. This firm is engaged only in processing; all decisions concerning input usage, prices, markets and design are controlled by the firm's head office in the home country. The Chinese firm operates as a processing branch and receives only a processing fee.

The firm has faced with a number of challenges such as rising labour costs. Prior to 2008, these could be absorbed by very high profit margins. Now that profit margins are lower, to stay competitive the head office is developing new products.

The export tax rebate policy has had little impact on their operations because they don't make the import and export decisions themselves. Similarly, renminbi appreciation doesn't affect their daily operations because all decisions are taken at head office. In fact, renminbi appreciation has provided some benefits to this firm because the borrowing to finance the initial investment was made in US dollars and so renminbi appreciation has reduced the value of their debt. Trade settlement between the head office and the Chinese firm is denominated in US dollars. Even in this case renminbi appreciation has not negatively affect the Chinese plant. In fact there are some small benefits to the company. The settlement cycle between the head office and the Chinese plant to meet production costs is 20 days. Over such a period, renminbi appreciation is typically small, so it has no impact. But, in order to expand production, investment decisions are made by the head office and financed by loans repayable at 3 month intervals. Over this period, renminbi

appreciation may have saved the head office some repayments on large US dollar loans. In short, exchange rate fluctuations do not affect the plant significantly.

Contract prices for imports and exports are set with the head office and so a minimum profit rate is made by the plant regardless of state of economy. All information on cost structures is known by the head office when the accounting is done and when contracts are drawn up. Contract prices provide some stability for plant production costs during the contract period; likewise the head office has some revenue stability.

Thus, the exchange rate has had only minor impact on the daily operations and decision-making at the plant itself. The impacts of renminbi appreciation are all addressed at head office and this has led to an increase in R&D spending, to increase the rate of product development, and to the phasing out of lower end products.

They have received many visits from agencies to discuss the impacts of exchange rate appreciation. This occurred especially in 2007 when renminbi appreciation was rapid. The Ministry of Finance, the State Economic Commission, the Foreign Trade and Economic Commission, and the Jiangsu Foreign Trade and Economic Commission were all frequent visitors.

Firm B

This firm, employing 600 workers, is 100% foreign owned by a Southeast Asian company and is in the electronic equipment sector. Its output is exported to the parent company for further assembly with the final consumer market in the U.S.and Europe.

Renminbi appreciation has had a large impact. All of the exports are settled in dollars while their costs are made up of imported materials (approximately 50% of total material input costs) and settled in dollars, while the other half is domestic inputs and are

purchased in renminbi as are labour costs. In 2005-8 the firm had sufficient orders from the parent company that renminbi appreciation had only a limited effect. However, during 2008-09 orders fell and the company made a loss. Since 2010 the business has had to go through major adjustments in order to return to (low) profitability. Profits have been squeezed by the appreciating renminbi and rising wage costs.

The firm's main responses have been to increase total output and to bargain with suppliers for reduced material input costs. The head office also plans to introduce new products which use improved technology in order to gain some control over product prices.

Even though they are only a small firm they had many visits during the 2008 global financial crisis from all levels of ministries as well as academics. Prominent amongst them were the National Development Reform Commission and the Jiangsu Economic and Trade Commission, Development Division.

The view in this enterprise is that if the government wants to help firms they choose state owned and domestic firms rather than foreign-owned firms. To support this, the manager pointed out that most of China's 4 trillion renminbi stimulus package went to domestic firms. Generally, the higher level governments were not seen as doing much for foreign firms while local governments might help with finding labour and solving labour disputes but no more than that.

Firm C

This firm is one of China's largest cable producing companies. It is privately owned with shares traded on the Shanghai A market. It produces two types of cables, one of which is hi-tech (fibre optic), the other low-tech (electrical).

Renminbi appreciation has had large impact on this company. In 2005-8, the renminbi appreciation put great pressure on them as they exported the low value added low tech products. In response, the firm adjusted its production structure to concentrate on exports of the hi tech cables and to sell more of the low tech cables on the domestic market. The result is that exports have increased and the firm has not been adversely affected by the global financial crisis or by the post-2010 renminbi appreciation. It now exports to 78 countries primarily in East Asia, Southeast Asia, East and Southern Africa, South America and the Middle East.

The increasing exports of the high tech cables has enabled them to minimize losses from renminbi appreciation. This is because they have some power over price setting and are able to pass on exchange rate losses in the form of higher prices to purchasers. The firm now builds into its contracts an expected rate of renminbi appreciation. The profit margin on the export of the low tech cables, however, has been greatly reduced as the firm is unable to pass on exchange rate changes in the form of higher prices.

In 2007, both of their products qualified for an export tax rebate of 13%. In 2008, when the global financial crisis occurred, the rebate rate on the hi tech exports returned to 17% rebate but the rebate rate for the low tech cables remained at 13%.

The firm has received visits every year from many agencies interested in Chinese private businesses.

Firm D

This private company, established in 2000, produces bicycles for the foreign and domestic markets. In the early years, when the exchange rate was US\$1: RMB8, the firm

had a high profit margin. In 2005 when the renminbi appreciated, it still exported high volumes but the profit margin fell and it started to feel pressures on its bottom line. Export tax rebates increased to ease this pressure a bit. However, the traditional product had become unprofitable after the 2005 appreciation. The firm tried to negotiate higher prices with foreign buyers but prices went up 1-2% while renminbi appreciation was 5%.

In response, the firm changed strategy and switched from traditional to electric bicycle production. The latter have a higher value added and export volumes and profits increased as a result. The firm is part of a larger electrical company and benefits from having the industrial chain centred in the locality.

The firm has 195 employees. Originally the majority were migrants but now it hires locally. 50% of output is exported and 50% is sold domestically. Exports are primarily electric bicycles to the EU while traditional bicycles are supplied to the domestic market. The firm has some ability to increase prices in the face of renminbi appreciation especially if new models are introduced.

Before 2008 the firm has a 9% export tax rebate. This increased to 15% in the crisis period. Ministries only visited the firm during the crisis with the National and Provincial Administration Commissions of the Development Zone prominent. There was a consultative conference in Jiangsu organized by Wen Jiabo in 2008. Large exporters were invited to attend and complained and the result was an increase in the export tax rebate. This company was too small to be invited but the large ones spoke on behalf of the export sector. Its business conditions improved after 2009.

Firm E

This private firm, employing 300 workers, produces bedding materials and has been affected by renminbi appreciation, large increases in raw material prices and in labour costs. Their exports are settled in US dollars but their material and labour costs are paid in renminbi. They produce on contract to large international buyers such as Wal-Mart. These buyers know everything about the firm and know what it can absorb with renminbi appreciation. The firm has no ability to negotiate with these buyers which control the wholesupply chain. In the face of renminbi appreciation, large buyers reduce the size of their orders and allow renegotiation on quality but not price.

In the first period of renminbi appreciation, 2005-8, appreciation was fast but the firm had a higher profit margin and lower labour costs during that period and so remained profitable. After the crisis, continued renminbi appreciation, along with increasing labour and material costs, has reduced their profit margins to very low levels and the firm has had to reduce the quality of its products even though senior managers do not believe that this in the firm's longer term interests.

In the early years of operation, the export tax rebate was 16% but went down to 13% before the crisis. In 2008 it returned to 16%. However, foreign buyers know this and take it into account when contracting with the firm and so the firm does not get the benefit of the increased rebate; it is all passed on to the foreign buyer. Since buyers know the firm's labour costs, material costs, and taxes the firm only receives a processing fee in effect.

The senior managers feel that the firm is not in a sector that the government cares about and that the local government wants to shake out the textile sector. There have been

many bankruptcies in this sector and they feel that if they go bankrupt no one will care. They have had no visits from Ministries or from the municipal government.

5.0 Analysis

The evidence presented in the interviews sheds important light on the debates outlined in section 2. We structure our discussion around three main points, namely, the degree to which a set of coherent "tradable goods sector interests" is apparent, the role of complementary policies and channels of influence, and the importance of national policy frameworks.

With respect to the interests of the tradable goods sector, it is clear that firms engaged in exports have been heterogeneously affected by exchange rate appreciation. The political economy literature contrasts the interests of the tradable goods sector, which favours an undervalued exchange rate, with the interests of other sectors such as banking and finance which favour an overvalued exchange rate. However, firms in the tradable goods sector experience exchange rate changes in multiple ways suggesting that high level of aggregation of interests is problematic. In particular, the following patterns emerge from our interview data.

Firstly, the effect of exchange rate appreciation depends upon where inputs are procured. As economic theory would predict the firms which are most affected by exchange rate appreciation are those which purchase most of their inputs domestically and export most of their products receiving foreign currency in exchange. Other firms, with mainly imported materials, gain through lower priced imports when the exchange rate appreciates to partially offset the effects of appreciation on their export prices. Thus, firms engaged in the international processing trade are less affected than firms sourced

from domestic inputs. Thus, Firm A has been less affected than the others as it is processing all imported materials. Firms, such as Firm E, with all domestically purchased inputs have been affected much more by renminbi appreciation.

The differential impacts of exchange rate appreciation also has other dimensions. Key here is the type of product which is being produced. Research on global commodity chains makes the distinction between buyer driven and producer driven chains (Gereffi, 1996). The difference between them lies in the degree of market power which firms have in the chain. In the context of this paper, this means the degree to which firms are able to affect market prices and the degree to which they are therefore able to pass on exchange rate changes in the form of higher prices either to the firms purchasing their products or to final consumers. That is, the extent to which exchange rate 'pass through' is possible.⁴ This varies in our sample of firms by the level of technological sophistication of their products. Specifically, low tech products such as the textiles produced by Firm E afford the firm no opportunity to pass on exchange rate changes through price increases whereas Firm C, by switching to the production of higher value-added and technologically more advanced electric bicycles has been able to gain some power over prices. This is also well illustrated by Firm D which produces both high and low tech cables; it has significant control over prices of the former and is even able to build exchange rate appreciation into its contracts whereas it has no such ability in the case of its low tech exports which are sold on highly competitive international markets.

⁴ Several Chinese economists have examined the differences in pass through effects for China's exports and imports. See, for example, Feng et al (2010) and Wu (2010).

Our sample contains two firms which are 100% foreign owned. However, they differ in the degree to which they are integrated into the parent foreign firms' production operations. Firm A is completely integrated and has very little autonomy over production and pricing decisions. All of these decisions are made by the firm's head office and any effects of exchange rate changes are only felt through production decisions made at head office. To date, these have been few. Indeed, the continued investment and expansion of production at the China plant has meant that the company has actually also experienced some benefit from renminbi appreciation in the form of decreased debt burdens. The fact that this firm is also engaged only in the processing trade has also limited the effect. The ability of head office to specify input and output prices has undoubtedly enabled it to offset exchange rate changes by shifting profits to low tax jurisdictions. For a large company, employing 13,000 people its annual profits tax is very low, comparable to totals paid by small and medium sized companies in the same locality, which suggests high degrees of the use of intra-firm pricing strategies to minimize the effects of tax and exchange rate levels and changes.⁵ Firm B is in a different position since it less integrated into the main company. It is responsible for selling some of its own output not contracted by the parent company and so has seen greater impacts of renminbi appreciation.

These considerations suggest that while it may the case that, in general, exporters have an interest in an undervalued exchange rate the intensity of that preference varies considerably between exporting firms depending on where they source inputs, the characteristics of the commodity chain in which they operate and the degree of

⁵ Evidence of transfer pricing by joint ventures and foreign firms is also reported in PBOC (2006).

integration with overseas parent companies. This heterogeneity in the effects of exchange rate appreciation on exporters suggests that the "policy coalitions" identified in parts of the literature surveyed in section 2 may be more difficult to establish, outside of periods of rapid exchange rate appreciation, then is typically suggested.

Parenthetically, this is even more true for foreign associations which typically consist of firms in the tradable and non-tradable goods sector. Take for example, the American Chamber of Commerce in Shanghai. This body has shown itself capable of exerting influence on Chinese government policy. For example, Wang et al (2010: 99) report that "before its promulgation, the Shanghai-based American Chamber of Commerce lobbied hard against the employment security provisions in the proposed labour law and won some last-minute concessions." Despite the fact that lobbying against increasing labour standards in China was contrary to official U.S. government policy, the Chamber nevertheless publicly entered the debate on behalf of U.S. companies' interests in being able to hire and fire freely. In interviews⁶, representatives of the Chamber told us that their bank members were regularly consulted by the Chinese financial regulatory authorities about the best policies to use to limit "hot money" inflows. The Chamber clearly has access to policy-making circles. However, with respect to the exchange rate, the Chamber has not attempted to exert influence. In part this is due its members being divided on the issue since it comprises of both manufacturing and financial firms. This extends not only to different preferences over the level of the exchange rate but also over its stability; we were told that manufacturing firms place a high value on stability whereas financial firms prefer volatility as this generates arbitrage and hedging business

⁶ Conducted in November 2010.

for them. But it is also due to the fact that Chamber members view the public disputes between the U.S. and China over the exchange rate as unhelpful to the business environment and hence would prefer that the issue was kept low key. For both of the reasons, a potentially powerful lobby group has kept its counsel when it comes to the exchange rate.

The second area where our firm-level interview data advances the debate is in terms of the role played by complementary policies. In particular, Steinberg and Shih (2012) argue that the demand for exchange rate policy change by exporters may be less than conventionally suggested when compensatory policies are available. On the basis of this, they present a temporal account of the intensity of pressures emanating from the export sector. Our data broadly support this interpretation although we find that the impacts of changes to the export tax rebate system is more complicated than that presented by Steinberg and Shih.

The first point to note in this respect is that all firms noted that exchange rate appreciation has affected them differentially since 2005. Initially appreciation had little impact on them as their profit margins at that time were high and the macroeconomy (domestically and globally) enabled export growth to continue. Firm D found its profitability so significantly adversely affected by the end of 2005 that it was forced to seek out new product opportunities and switched to electric bikes but the others continued to make reasonable profits during this phase of appreciation. This accords with Steinberg and Shih's period of "export indifference" in 2006-07. The "exporters fight back" in 2008, attributed by Steinberg and Shih to the faster rate of renminbi appreciation, is dominated in our interview data by the global financial crisis of 2008

which affected domestic and global demand conditions. This is the topic which was the most important to the senior managers that we interviewed and suggests that demand conditions are the most important of the compensating policies which firms consider and dominate appreciation concerns. Appreciation concerns were clearly evident but the importance of robust and growing markets certainly more important. That said, export tax rebates are also seen as important in easing exporting pressures whether caused by appreciation or decreases in external demand. In fact, export tax rebates were increased seven times between August 2008 and June 2009 in the face of weakening external demand in the global financial crisis; the exchange rate was re-pegged in July 2008.⁷

Since 2010, exchange rate appreciation has resumed and export tax rebates have decreased as global market conditions improved. However, it is clear from the interview data that the level of export tax rebates and the state of export competitiveness is complicated. In the global financial crisis increases in the export tax rebate were used to increase the profitability of the export sector affected by the global economic slowdown. However, as well as this macro function export tax rebates also play a role in facilitating structural change to the economy. This has long been evident from the differential rebate rates applied to different industrial sectors with higher rebates applied to those sectors which government has prioritized.⁸ The interview data from Firm C provides further

⁷ See also Pei and Zheng (2010) for the role of export tax rebates on supporting China's exports.

⁸ In fact, there are over 600 product categories for the export tax rebate scheme. Product categories are then placed in an export tax rebate rate category; which rebate a product category receives may change over time and individual [products can be moved between product categories.

evidence of this. Prior to the global financial crisis, both the high and low tech cables which they produced received a 13% export tax rebate. During the crisis the rebate on the high tech products increased to 17% but that for the low tech products remained at 13%. This was despite the fact that the high tech cables were profitable for the firm and that it was the low tech cables which were struggling. The differential application of the export tax rebate in this case was designed to encourage structural change rather than simply to provide tax relief for the most affected sectors. Firm E also sheds light on the way in which the export tax rebate may not directly assist exporters. As the general manager explained, this firm operates in a highly competitive industry and in a global supply chain in which purchasers have significant power. If the export tax rebate is increased this is used by the global purchasers to reduce the purchase price from the Chinese supplier; the benefits of the tax rebate does not increase the profitability of the Chinese firm although, since it reduces their costs, may help it in retaining their orders from global purchasers.

In short, the export tax rebate system provides selective assistance to firms depending on the products that they produce and the supply chain in which they are situated. It does not act as a generalized system of support for all exporters facing pressures from exchange rate appreciation or global market conditions. It is undoubtedly useful to exporting firms but its differential application and effects again make a "coalition of interests" benefitting from it more difficult to establish than at first sight. .

The third area where our interview data provides insight is the issue of channels of influence. That is, whether private sector pressures from exporters have significant impact on policy formulation or whether, as Liew and Wu (2007) argue, the decision-

making system is more closed, less open to "interest group" influence, and fought primarily among elite policy-makers at the centre. Our interview data provides support for the latter interpretation and points to a significant degree of "policy insulation" for central decision-makers.

Firm D reported that the special consultative conference called by Premier Wen in Jiangsu during the global financial crisis was important in extracting concession from the central government in the form of increased export tax rebates as suggested by Breslin (2010). Although too small to be invited itself, the firm's managers were of the opinion that the larger firms which did attend spoke of behalf of the export sector as a whole. There is evidence, therefore, of perceived influence in decision-making. Beyond this special 'direct access' event, however, firms clearly see themselves as "policy takers" rather than as having a role in policy making. None believed that they had any direct input into policy making processes or were members of any associations representing their interests. None believed that local governments could or did effectively lobby for exchange rate policy change on their behalf. Firms' role was much more indirect through the many surveys conducted by various Ministries and Commissions. What emerges from the interviews is a picture where multiple agencies, from the central to the provincial level, all undertake their own surveys of conditions in exporting firms. These agencies include central Ministries, research institutes which report to central agencies (such as the National Reform Development Commission reporting to the State Council), and provincial level bodies (such as the Jiangsu Provincial Economic and Trade Commission). The People's Bank can also be added to this list. All of these agencies conduct their own surveys to ascertain the effects of policies such as renminbi

appreciation on exporting firms as well as other factors including general market conditions.

As an example of the type of research conducted and conclusions reached consider the recent analysis undertaken by staff at the Suzhou branch of the PBOC and reported in its internal journal. Zhu, Yang and Xu (2011) report on the impacts of exchange rate reform on an electronics company in Suzhou engaged in the processing trade. The authors report that the enterprise currently has a 30 per cent world market share in its product. Profit rates were around 5% in 2005 and 2006, jumped to 16% in 2007 and 13% in 2008 but then, since the global financial crisis, fell to under 4% in 2009 and 2010. The fall in the profit rate was attributed to increasing labour and material costs as well as weak external demand. The appreciation of the exchange rate was not seen as a major factor of concern for the enterprise but rising costs and an inability to exercise any market power over prices were. In addition, the effects of appreciation were managed by the enterprise by using forward contracts to reduce exchange rate risk, adjusting its debt structure and paying more attention to the domestic market.

This case study provides and example of how information can be used by the agencies in constructing their policy advice to central decision-makers in line with types of inter-institutional rivalries and interests which Liew and Wu describe. Here, it is the interpretation of the evidence by the agencies which is important. In this case, research done by alocal branch of the People's Bank, an institution generally favourable to greater exchange rate flexibility, concluded the firm had not suffered unduly from exchange rate appreciation, that mechanisms were available to firms to mitigate any such impacts and that other factors were more important explanatory variables in causing the decline in the

profit rate. This accords with information that we were told in an interview at another local PBOC branch, namely, that no firms in the locality had gone bankrupt due to renminbi appreciation; all bankruptcies had been caused by other factors. Thus, firms enter exchange rate policy-making as the objects of discussion, their experiences subject to interpretation by differing agencies, rather than as actors in their own right. This seems much closer to the role played firms in our sample than that of an active "interest group" of the type described by Steinberg and Shih.

To further support the finding of policy insulation for central decision-makers in the area of the exchange rate, it is interesting to note that a common point made by all of the senior managers interviewed was that "renminbi appreciation was a market choice". As such, this was not something that they felt that the central government could control or be held responsible for (and therefore need to compensate for). They contrasted the exchange rate, which they viewed as being determined by the market, with the interest rate which they viewed as clearly controlled by the central bank. Despite the fact the central government has clearly intervened to control the exchange rate – such as the repegging in 2008 and the setting of the daily fluctuating bands during other periods since 2005 – nevertheless firm managers clearly viewed the exchange rate as a market determined phenomenon. This may partly reflect the fact that central bank pronouncements, including those by Governor Zhou Xiaochuan, have continually stressed that "the market" is playing a greater role in exchange rate determination and the fact that during 2012 the exchange rate fluctuated in both directions, as shown in Figure 1, indicating the influence of market forces. Whatever the reasons, the central decision-

makers appear to have a higher degree of policy insulation in the area of exchange rate policy than over other economic variables.

Our research also suggests that policy matters more than Steinberg and Shih suggest (where interests dominate "independent policy") but also that Liew and Wu's stress on the Wen-Hu leadership's pro-rural policy may not be the place to look for the reasons behind exchange rate appreciation after 2005. As noted above, the appreciation of the renminbi is not an unambiguous benefit to rural areas producing import-competing agricultural goods so the argument that exchange rate appreciation is part of a pro-rural policy shift is tenuous. More important, in our view, is the policy shift *within* the export sector. That is, central policy has stressed the upgrading of industry and moving to higher value-added exports and it is here that exchange rate appreciation has played a role. The shift from the focus on labour-intensive exports to higher value-added exports made by the central government has reduced the obstacles to exchange rate appreciation.

This central policy of industrial upgrading has been in place during past five year plans but its importance has increased since 2005. NDRC Minister Ma Kai (2006), in outlining the 11th Five Year Plan (2005-11), while recognizing the importance of labourintensive production also stressed that the China's competitive edge in this regard will "weaken" as raw materials prices rise and environmental protection increased. As a result it noted the need the "readjust and upgrade the product mix" and "enhance independent innovation capability vigourously."

In support of this policy orientation, the State Council announced in late 2005 a series of "major measures to promote the adjustment of industrial structure" with the NDRC simultaneously publishing its "Guiding Catalogue". (NDRC 2005). This

Catalogue categorized industries into those encouraged, restricted and to be eliminated with the aim of guiding governments and banks in their support and lending practices in order to meet restructuring goals including "optimizing and upgrading the industrial structure." (ibid). This latter policy orientation is clear from interviews with local officials in the industrial and trade zones which we visited. In the zones, the high tech sector is given priority for the use of zone land, receives guarantees of power supply from the local government and is given assistance with loan applications to banks. These policies are common provincially but also include some municipal government inputs as well. These policies of favouring high tech industries complement national policies (including the structure of export tax rebates discussed above). As Firm E in our sample demonstrated, managers firms in low tech industries, in this cases textiles, despite the importance of this sector to the Jiangsu provincial economy, expressed the feeling that governments are not concerned about them and, in fact, that the municipal government was in favour of a "shake out" in the sector. Municipal governments had intervened to help exporting firms where there were labour disputes but none of the officials expressed the opinion that they could have any input into exchange rate decision-making on behalf of their firms. If the strength of the export sector's interests have been reduced in exchange rate decision-making it is because the policy shift away from a labour intensive export strategy at the central level has made it so.

If this explanation is correct then there is some evidence from our interview data that the strategy is working. All firms noted that their wage levels had increased significantly over the past five years typically doubling from around 1200 renminbi per month to 2500-3000 renminbi per month over the period. This combined with increasing

material input process and further exchange rate appreciation since 2010 had made all of them producing low tech products to adapt their strategies. A common response of firms was to increase the technological sophistication of their products, move up the valuechain, increase R&D, and introduce more new products as ways of raising their market power and ability to influence product pricing. This was evident in all firms that we interviewed and suggests that they are all facing common pressures and developing similar strategic responses to changing business conditions including continuing exchange rate appreciation.

6.0 Conclusion

The determination of China's exchange rate has been a subject of considerable interest. The (perceived) persistent undervaluation of the renminbi together with exchange rate policy changes in 2005 (adoption of managed float), 2007 (widening of exchange rate band), 2008 (re-introduction of dollar peg) and 2010 (resumption of managed float) have led to competing explanations of how the exchange rate is determined. Some have taken a political economy determinants model, applied to other countries, and adapted and extended it to fit Chinese circumstances. This has centred on examining the role of the export sector interests (and their changing strength) in explaining the observed outcomes. Kaplan's (2006) identification of these interests as constituting a "political obstacle" to exchange rate reform has recently been extended by Steinberg and Shih (2012) to allow for the other compensatory policies to substitute for exchange rate policy change but the approach is also based on the importance of interest groups, in particular private sector exporters, in determining exchange rate policies. These approaches stand in contrast to that taken by Liew and Wu (2007) who argue that

interests groups play a very minor role in exchange rate determination and that explanation for policy needs to focus on inter-institutional rivalries and strengths, key committee composition, and leaders' personal backgrounds and policy preferences at the elite level.

In this paper, we have sought to shed further light on the puzzle of China's exchange rate determination through interviews with firms and officials at the local level in one of China's most important export provinces. Based on in-depth interviews with exporting firms and local officials we find the following. Firstly, that exporting firms vary significantly in the impacts of renminbi appreciation depending on the sourcing of inputs and their position within the supply chain. This finding suggests that the export sector's interests in opposing exchange rate appreciation vary considerably and that a coalition is likely to be more difficult to form than previously implied. Secondly, we find that compensating policies are important to exporters with the level of demand particularly important. Export tax rebates also play an important role but the rebate system plays a dual function in also facilitating structural change. As such, the highest rebates do not necessarily go to those exporters facing the greatest competitive pressures; in fact, the lower rebates for labour intensive products suggest the reverse. Thirdly, we found little evidence that exporting firms play a significant role in policy formation as the "interest group" approach suggests. Rather, firms are involved as subjects for study by various central and provincial agencies which use the information gained to support their positions. Central decision makers appear to have a significant degree of policy insulation from outside pressures in making their decisions, an insulation which seems particularly high in the case of exchange rate decisions. Finally, we find argue that central policy

frameworks do have an important role and that the strategy of increasing the value-added of China's exports through structural upgrading in the export sector is likely to have played a role in weakening the opposition to exchange rate appreciation.

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