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# THE SHANXI BANKS

Randall Morck
Fan Yang

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**ABSTRACT**

The remote inland province of Shanxi was late Qing dynasty China's paramount banking center. Its remoteness and China's almost complete isolation from foreign influence at the time lead historians to posit a Chinese invention of modern banking. However, Shanxi merchants ran a tea trade north into Siberia, travelled to Moscow and St. Petersburg, and may well have observed Western banking there. Nonetheless, the Shanxi banks were unique. Their dual class shares let owners vote only on insiders' retention and compensation every three or four years. Insiders shares had the same dividend plus votes in meetings advising the general manager on lending or other business decisions, and were swapped upon death or retirement for a third inheritable non-voting equity class, dead shares, with a fixed expiry date. Augmented by contracts permitting the enslavement of insiders' wives and children, and their relative's services as hostages, these governance mechanisms prevented insider fraud and propelled the banks to empire-wide dominance. Modern civil libertarians might question some of these governance innovations, but others provide lessons to modern corporations, regulators, and lawmakers.

Randall Morck
Faculty of Business
University of Alberta
Edmonton, CANADA  T6G 2R6
and NBER
randall.morck@ualberta.ca

Fan Yang
Edwards School of Business
University of Saskatchewan
Saskatoon SK
Canada S7N 5A7
yang@edwards.usask.ca

# 1. Introduction

In the early 1800s, an era of profound isolation, the remote northern inland province of Shanxi hosted China's premier financial center. Its banks offered empire-wide branch networks and a full array of services markedly resembling those of Western banks. While most accounts suggest a purely Chinese origin, and thus a remarkable case of parallel economic evolution, a strong case can be made that Western banking diffused into Shanxi via Russia.

Nonetheless, its banks were distinct Chinese innovations. Their unique dual class equity, managerial incentives, and contracting arrangements ensured confidence in their bank drafts, which sustained trade, and even public finances, amid the mounting chaos of the late Qing dynasty. To illustrate, we describe the Sunrise Provident Bank, capitalized in 1823 with dual share classes. To discourage entrenchment, managers' shares carried non-binding votes in management meetings only; while owners' shares carried votes only on Grand Assessment Days - held after each fiscal cycle (typically three or four years) to fire or retain managers and reallocate their shares. This precisely inverts modern dual class structures, which grant insiders overwhelming voting control. To further align managers' and owners' interests, both classes paid identical dividends. To motivate long-term thinking, but keep their heirs out of decision-making, upon their death or retirement managers' shares were converted into a third entirely non-voting class that paid dividends for a fixed term and then expired. Managers' good faith was guaranteed by their relatives' service as hostages.

Adopted with variations by other Shanxi banks, these structures mitigate very modern governance problems. While infuriated modern shareholders might pine to hold C.E.O.s' relatives hostages, they might seriously consider paying managers with finitely lived nonvoting shares and inverting voting rights in dual class equity structures to mitigate, rather than magnify, agency problems.

# 2. The Banks

In 1823, Li Daquan founded the Rishengchang [日昇昌] Bank in Pingyao county, Shanxi Province.[1] The name combines *ri* [日, *lit*. *sun*], *sheng* [昇, *lit. rise*], and *chang* [昌, *lit. prosperity*], so we render it *Sunrise Provident Bank*. Li owned Xiyucheng, a dyed goods operation that bought raw materials in Sichuan and ran stores in Beijing, Shenyang, Tianjin, and other centers. Lei Lutai, a Tianjin (or Beijing) manager, observed expensive silver shipments often passed each other, going in opposite directions on this "long

[1] Alternative founding dates are 1797 (Fan 1935; Lu 1936), 1815 (Jie 1944), 1831 (Chen 1937), and 1824 (Wei 1944). Wang (1998) argues for 1823 on the grounds that the first fiscal cycle was six years and the first Grand Assessment Day was in 1829.

and arduous route" (Yang 1952, p. 82) and perceived a business opportunity: replacing expensive private security, wagons, and pack animals with a clearing house.[2]

Initially offered in Tianjin, Wuhan and Pinyao, the service was unexpectedly lucrative. Probably in 1823, Lei persuaded Xiyucheng's owner, Li Daquan, to focus on branch banking, rather than dyed goods by offering inter-regional accounts settlement, deposit accounts, loans, and currency exchange services. Li capitalized the bank, based in Pingyao, his home country, with 300,000 *tael* – about 450,000 silver dollars (Liu 1937) – and Lei perhaps added 20,000 *tael* (Fan 1935; Lu 1936).[3] Top management included Lei as General Manager and two assistant managers: Mao Hongsui and Cheng Dapei.

A few years later, Mao resigned, apparently over strategy disagreements with Lei. Within a few years, Mao organized five more banks; and soon their managers were leaving to found yet others. Generally similarly capitalized, the proliferating banks [*Shanxi piaohao*] were, despite China's long economic history, the first institutions to offer a full range of banking services - making Pingyao and the nearby Qixian and Taigu counties into financial centers.

From 1823 to the early 1840s, the Shanxi banks grew rapidly by providing bank drafts for traveling merchants – the business opportunity Lei Lutai discovered. A buyer could deposit cash at his local branch and obtain a bank draft [*huipiao*]. This was ripped in half, with one half sent to the seller as a promise of payment and the other sent to the seller's branch of the bank. When the buyer confirmed receipt of the goods, the seller could claim the missing half of the bank draft at his branch and effect the transfer of funds into his account there. Figures 1 and 2 display two forms of bank draft in common use – the former for ordinary clients and the latter for longstanding clients with large balances.

The banks also exchanged currencies. Twenty forms of bulk silver circulated in this era, each with a different weight or purity. Thus, a note on Figure 1 tells the cashing branch to use a specific unit without informing the client; Figure 2 defines the unit explicitly.

In their formative years, the banks paid depositors 0.2 to 0.3 percent per month and lent at 0.6 to 0.7 percent per month.[4] Their biggest clients were merchants and wealthy individuals, especially nobility with whom the bank had connections. The banks also recorded loans from one party to another,

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2 Yang (1952, p. 82) puts Li in Tianjin; Lu (1936) has him in Beijing. He was perhaps reassigned, or ran both simultaneously.

3 By the 19th century, paper money was long abandoned and commodities such as bulk silver, measured in tael, served as currency. The *tael* had different values in different cities: a *Canton tael* was 37.5g, a *Shanghai tael* was 33.9 g., and a *customs* or *haiguan* [*海关*] *tael* was 37.8 g. The conversion rates between common *tael* were well-known, and local units took precedence unless a particular weight or purity was specified. Historians generally take one *tael* as 37.5 g. during this era. The silver dollar (piece of eight), then used in both China and the United States, contained 25.56 grams of pure silver, making one *tael* roughly 1.5 silver dollars. One *tael* is now 50 g. on the mainland and 37.8 g. in Hong Kong.

4 Chen (1937) describes interest rates of 2 to 3 *li* monthly for deposits and 6 to 7 *li* monthly for loans. Monthly rates in *li* (厘) are in units per thousand, while annual rates in *li* are in percent.

as in Figure 3. These certificates may have traded at a discount, but we have no evidence of this. Figure 4 records a recurring transfer from one account to another. Figure 5 is a simple deposit record.

## 2.1 Harmony in Equity

In stable times, Confucian hierarchical principles and imperial edicts could enforce agreements, usually without resort to actual courts. But seemingly incomprehensible foreign victories from 1842 on undermined both traditions and imperial authority, and resort to formal courts was not only shameful but multiply ineffective. First, the law was an insiders' game of ritual formalism (Djankov et al. 2003; La Porta et al. 2008). Second, merchants' (including bankers') descendents were barred from civil service exams for three generations, so local magistrates (judge-prosecutors) were mainly from landholding classes and under social pressure to protect their own. Third, unrestrained by juries, or even defence attorneys, magistrates charged for verdicts. Finally, merchants filled the cellar of the Confucian caste hierarchy – below peasants and tradesmen – so their bribes likely seemed dirtier.

The banks therefore needed their own contract enforcement system, one robust enough to inspire trustworthy behaviour in branch managers throughout China. The management at each branch was entirely professionals: a general manager made all major decisions, assisted by various vice presidents, who supervised clerks and other employees. For brevity, we call these insiders. The banks were not widely held: each had relatively few large shareholders - wealthy Shanxi merchants, whose role in governance was carefully constrained, and actually quite limited.

Share ownership normally confers cash flow rights, which give shareholders dividends, and voting rights, which let shareholders choose the firm's top managers. Jensen and Meckling (1976), considering cash flow rights only, argue that insiders with too few shares have insufficient incentive to maximize shareholder value – a *divergence of interests* problem. This reasoning argues that higher insider stakes improve governance, and underpins Jensen and Murphy (1990a, 1990b) and others, who would compensate managers with stock or stock options.

A major downside of large insider equity ownership is *entrenchment* – the attendant voting rights. If insiders, or their heirs, control enough votes, they cannot be displaced even if they no longer provide able management (Morck et al. 1988; Stulz 1988). This argues for insider stakes sufficiently low that other shareholders can outvote them. More generally, insider stakes then ought to be medial, balancing divergence of interest problems against entrenchment problems.

The Sunrise Provident and its fellow Shanxi banks developed a more thoroughgoing solution to this balance with dual class shares that separated cash flow rights from voting rights. In modern corporations, dual class shares generally give insiders magnified voting power and scant cash flow rights and outsiders primarily cash flow rights, worsening divergence of inters and entrenchment problems simultaneously (Nenova 2003; Gompers et al. 2010). The Shanxi banks also used dual class shares, but with the exact opposite configuration: Insiders held large equity blocks, but of non-voting shares only – maximizing their cash flow rights to counter divergence of interests problems while bestowing no voting rights at all, thus precluding entrenchment.

The Shanxi banks had two classes of equity – capital shares [*yingu*], and expertise shares [*ding shen gu*] – generally equal in number.[5] These were not precisely the same as voting and non-voting shares in a modern corporation, so a short explanation is in order.

Capital shares, which represented fractional ownership of the bank's assets, were initially owned by the founding shareholders and passed to their heirs. The capital shareholders collectively owned all of the bank's assets, and had a price equal to the bank's assets divided by the number of capital shares. Thus, if the Sunrise Provident was capitalized at 300,000 *tael*s and had 30 capital shares outstanding, each was worth 10,000 *tael* or 150,000 silver dollars. The capital shares were not, as far as we can tell, traded. However capital shareholders could redeem their capital shares recover their initial contributions to the bank's capital in silver. Capital shares were entitled to dividends, paid out at the end of each fiscal cycle – either three or four years long.[6]

At each fiscal cycle end, the bank declared a *grand assessment day* [*da zhang qi*], on which the profits of the last fiscal cycle were reported to the capital shareholders, who then decided the dividend. At the same meeting, the capital shareholders evaluated the performance of the management team and employees, and adjusted the insiders' expertise shareholdings appropriately. Expertise shares that were unassigned to any manager or employee continued to pay dividends, but into a fund that added to the bank's assets. Also on the grand assessment day, the capital shareholder decided whether to replace the General Manager or renew his appointment for another fiscal cycle; and, based on the General Manager's reports to capital shareholders, whether to replace or renew the other insiders.

Capital shareholders had no control over the bank's daily operations, and could not influence its business decisions directly. Yet they had unlimited liability for the bank's debts, for limited liability would not be an option until the 1904 Civil Code (Kirby 1995; Goetzmann and Köll 2005). This open-ended liability meant that the insiders, the professional managers and employees who actually

[5] Capital shares, or *yingu*, with *yin*, meaning *silver*, and *gu* meaning *share* are literally *silver shares*. Expertise shares, or *ding shen gu*, with *ding* meaning *represent* and *shen* meaning *body* or *labor*, are literally *representing labor shares, or shares representing labor.*

[6] The banks used fiscal cycle several years long, not fiscal years, for updating their balance sheets.

operating the bank, had to be very carefully incentivized.

Managers and employees made no monetary investment in the bank – their investment was their expertise – but their expertise share paid the same dividend per share as the capital shares. The typical general manager or vice president was granted one expertise share, though some got as much as 1.3 shares (Fan 1935). Clerks were typically granted 0.2 to 0.3 expertise shares (Chen 1937). Expertise shareholder had no claim on the bank's assets.

In the most profitable fiscal cycles, dividends averaged 12,000 tae, roughly 18,000 silver dollars[7], per share. Insiders received salaries too – but even the general managers made no more than 1,500 to 2,000 *tael* per fiscal cycle (Lu 1936; Jie 1944). Insiders' prosperity thus primarily depended on the dividend and the next expertise shareholdings allocation, so their compensation was even more dependent on their performance than was capital shareholders' income.

The expertise shareholders could influence the day-to-day operation of the firm, each having a voice proportional to his expertise shareholdings. This voice bestowed the right to make and vote on suggestions to the general manager, who might act on them or not. Final control over all business decisions was entirely in the hands of the general manager.

In modern dual class firms, voting shares pass to heirs, who may be less able and prone to entrenchment (Morck et al. 2000; Pérez-González 2006; Smith and Amoako-Adu 1999; Amit and Villalonga 2006). If an expertise shareholder retired in good standing, or died on the job, his expertise shares turned into a third equity class, *dead share*s [*gugu*], which continued paying dividends to him or his designated heir for a period defined in his employment contract.[8] Dead shareholders, unlike expertise shareholders, had no voice in business decision-making. If an expertise shareholder quit or was fired for cause, his expertise shares evaporated instantly. For example, Mao's expertise shares in Sunrise Provident ceased to exist when he resigned to found a rival bank. Capital shares passed from generation to generation, but their voting rights only came alive on grand assessment days, when they could vote on the hiring, firing, and compensation of managers.

In short, the banks used carefully tuned equity ownership structures to make professional managers' wealth primarily dependent on their expert shares' future dividends, and on their individual performance assessments, which determined the quantity of shares they owned. This minimized the divergence of interest problems highlighted by Jensen and Meckling (1976). By giving expertise shareholders no vote in decisions regarding their hiring, firing, and compensation, this arrangement

[7] Lu (1936) lists the most profitable years as 1880 to 1900; during which the best performing bank distributed 20,000 *tael* per share per cycle and the worst distributed 5,000 to 6,000 *tael*. The Sunrise Prudent paid 12,000 *tael* per share per cycle.

[8] *Gugu*, with *gu* meaning *dead* and *gu share*, are lit. *dead share*. *Gu* also means *alumnus*, so these might alt. be *alumni* shares.

precluded entrenchment problems (Morck et al. 1988; Stulz, 1988). Moreover, the conversion of expertise shares into dead shares first removed retirees and heirs from involvement in business decisions, and the dead shares' sunset provisions later removed them from the shareholder list entirely. Since capital shareholders had no voice in day-to-day business decisions, controlling shareholders could not dictate bank lending policy, again precluding entrenchment.

Of course, this could all unravel in various ways. Below, we shall see how the capital shareholders, by manipulating their powers to reward or fire general managers on grand assessment days, subsequently nonetheless found ways to bias bank lending policies.

### 2.2 Incentive Compatibility

Qing China was a society in which people mistrusted outsiders, and generally trusted only family or people with whom they had longstanding ties. In such societies, large businesses run by professionals are disfavored (La Porta et al. 1997). Monopolistic merchant guilds circumvented these problems by vouching for travelling merchants, who paid association fees. While some guilds took members from many regions, "the Shanxi Dyed Goods Guild was restricted to families that originated in Pingyao county" (Golas 1977), and the Shanxi banks adopted similar restrictions.

The banks hired only from Shanxi, and some even kept to only one county. This was a powerful governance mechanism, for managers' expertise share dividends were paid to their families in Shanxi. The social and economic status of their families depended on their performance, and any malfeasance endangered not just their families' economic and social status, but their freedom and lives.[9]

The banks checked prospective hires' backgrounds back three generations. This was relatively straightforward because families seldom moved far, and old neighbors intimately knew each others' families and family histories. A candidate with clean background presented a personal guarantee letter from an eminent personage in his county. The background check and guarantor ensured the loyalty and honesty of the employees; but also protected them. If a dispute arose, the guarantor undertook negotiations with the bank to ensure the manager was not impugned unjustly.

The contracts employees signed also contained clauses to spread the capital shareholders' unlimited liability around. Employees also agreed to unlimited liability, pledging their property, and that of their families for their performance; with capital shareholders even "taking their wives and children as hostage" (Dong 1917; Chen 1937).

[9] Chen (1937) quotes Negishi (1907) on bank policy re. employee fraud: "if the employer finds an employee to have defrauded him, the employer can seize the employee's private property, or enslave his wife and children if he has insufficient property."

Self-dealing by insiders at remote branches was prevented by an assortment of rules (Jie 1944). To keep branch employees from developing side interests, they were forbidden from any other business activities, including lending their own savings to anyone. They were granted no leave, save for their parents' funerals, were accompanied by no family, and could not marry while on branch duty. They were allowed to write one letter home each month, but the letter was reviewed by the head office in Shanxi before being forwarded to the family.

This arrangement offends modern sensibilities, but it was a realistic response to conditions in the late Qing Dynasty, especially given the capital shareholders' unlimited liability. The arrangement motivated both hard work and honesty in an economy of endemic corruption. Throughout the bank's century-long histories, we find no hint of fraud or deceit by any professional manager.

## 2.3 Jade Parachutes

The Shanxi banks also devised a complicated pension system to ensure that those who worked hard for the shareholders were handsomely rewarded. This pension scheme was called either a *pension account* [*gong ji jin*] or *god of wealth account* [*caishen zhang*], and consisted of three funds.

One fund was bad state-of-the-world insurance.[10] At the end of each fiscal cycle, the capital and expertise shareholders negotiated the fraction of retained earnings that would go into this fund. The money in it could be used to top up a future dividend if an act of God harmed the bank's earnings.

A second fund paid interest to the capital shareholders, and contained their deposits – for capital shareholders were free to reinvest any fraction of their dividends. This fund provided a capital base for financing the development and expansion of the bank. Chen (1937) states that drawing it down required the capital shareholders' approval.

The third fund paid dividends to dead shareholders – retired expertise shareholders and their heirs (for a time). Thus, Jie (1944) describes as typical a General Manager formerly having one expertise share getting one dead share lasting for eight years and a lesser insider with one expertise share getting a dead share lasting seven years. Insiders with fractional expertise shareholders were granted identical fractions of a dead share, but expiring sooner for smaller fractions. Thus, dead shares arising 0.8 or 0.9 of an expertise share terminated after six years , those from 0.6 or 0.7 of an expertise share terminate after five years, and so on.

This gave retiring managers strong incentives to look to the long-run profitability of the bank, and to choose and train their successors well, for their incomes in retirement and the prosperity of their

[10] Jie (1936) calls this fund q *bei huang kuan*, lit an *account preparing for a bad state*.

heirs would depend on the performance of their successors. According to some reports, the first general manager of the Sunrise Provident nominated a candidate other than his own son as the next general manager on these grounds (Wang 1998, 2001).[11]

## 2.4 Opportunity in Crises

Bureaucrats and the feudal nobility were de facto above the law, and could confiscate wealth with impunity because their ability to manipulate the legal system made redress impossible. As the Shanxi banks grew more prominent, they presented a more attractive target for such predation. Consequently, the Shanxi banks, like other Shanxi merchants, sought to ingratiate themselves with important officials.

To this end, the banks directly financed the government, as when the Qing court fled to Xi'an in 1900, after the Dowager Empress Cixi's declaration of war on the major Western powers precipitated their occupation of Beijing. The banks also did a brisk business handling "donations" to the dynasty that bought honorary titles for their clients (Li 1917) and capital shareholders (Wei 1937/38).[12] The banks also invested in future civil servants by, for example, lending them funds or financing their travel to Beijing to take Confucian civil service examinations.

The banks' Beijing branches, especially, spent heavily entertaining officials and nobles. This provided returns in several ways. It attracted as deposits not only the wealth of courted officials and nobles, but whole ministries' budgets – the latter often paying no interest (Wei 1944). As their private and official business grew, the banks widened their branch networks throughout the empire.[13]

The 19th century was a sequence of disasters for the Qing and China, but the Shanxi banks turned each into a lucrative profit opportunity. The Treaty of Nanking, ending the First Opium War (1839-1842), required China to pay Britain a $21 million indemnity in silver. To raise this, the dynasty ordered each provincial government to transfer a levy of silver to British agents in the new treaty enclaves. Inland provincial governments, unable to transport huge amounts of silver securely to the treaty ports, faced a crisis – in which Lei Lutai, still General Manager of the Sunrise Provident, saw an opportunity. Lei instructed branch managers in inland provinces offer their provincial governments bank drafts to transfer the silver to the designated ports before the deadline. In preparation, Lei moved silver to its port branches, so when the provincial representatives arrived, sufficient silver awaited them. This worked flawlessly, and averted impending disaster. The impressed emperor dubbed Lei's bank the

[11] Confirmed by a telephone interview with Wang Yidian, a local historian involved in the restoration of the China Piaohao Museum on the site of Sunrise Provident Bank in 1990s.

[12] Wei (1937) records the Sunrise Provident buying its second generation owner the title *zhifuwei jia siji shangdai hualing.*

[13] The next revision of this paper will contain a map of the Shanxi banks' branch operations.

Clearance Everywhere Under Heaven Bank, echoing his traditional mandate "everywhere under heaven."[14] A plate so inscribed thenceforth surmounted the door to its Beijing branch.

The Taiping Rebellion (1851 to 1864), led by the bizarre "little brother of Jesus" Hong Xiuquan, deprived the dynasty of taxpayers in a swath of east central provinces, and cut loyal south-eastern provinces off from the capital. To transfer government revenues through rebel territory, the dynasty again turned to bank drafts. Thereafter, the military budget [*junxiang*], poll tax [*dingliang*], sale tax [*lijin*], and provincial indemnity levies [*gesheng ding'e tanpai waizhai*] all moved about China through interest-free accounts at the Shanxi banks, which lent at 7 to 8 *li* (Wei 1944).

When British opium traders provoked a Second Opium War (1856 to 1860), the Qing turned defeat into disaster by reneging on an 1858 peace treaty and arresting, torturing, and executing British diplomats. The infuriated Western powers occupied Beijing and added an 8 million *tael* ($12 million) war indemnity to the 1860 treaty, which legalized Christianity and opium, pried open more ports, and established more enclaves of foreign law.[15] Again, the banks profited transferring silver to the ports.

The 1900 Boxer Rebellion brought another foreign invasion that drove the Qing court from Beijing to Xi'an – its flight financed by the Shanxi banks. The dynasty's failure to protect diplomats and Christians during the rebellion triggered yet another indemnity in the 1901 Boxer Protocol, again in silver, which Shanxi banks again helped transfer from inland provinces to foreign agents on the coast.

During their best years, from 1880 to 1900, the Shanxi banks' dividends averaged 12,000 tael, or 18,000 silver dollars, per fiscal cycle. These were huge fortunes: for comparison, a county administrator [zhixian] earned an annual salary of 45 tael or $67.50 in silver dollars. Shanxi's best and brightest were well advised to forsake the Confucian civil service for careers in banking.

## 2.5 The Setting of the Sunrise Provident

Lei Lutai died at his desk in 1849. Though his son was an employee, Lei named another his successor. Cheng Qingpan and two subsequent general managers loaned prudently, and the bank prospered. In 1880, the capital shareholders, at Li's request, created a new class of *non-voting capital share* [fugu] for managers.[16] These let managers reinvest their dividends in the bank without gaining votes.[17] The new

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[14] *Huitong tianxia* [**匯通天下**, lit. *draft everywhere under heaven*] (telephone interview with Wang Yidian confirmed this to be a well-known part of the Sunrise Provident Bank's history, and that its Beijing branch had a large plate [竖匾] inscribed with these words above its main entrance for many years.

[15] The 1858 Treaty of Tianjing, which the Chinese government failed to honor until 1860, opened eleven more ports: Niuzhuang (Yingkou), Dengzhou, Taiwan (Tainan), Danshui, Chaozhou, Qongzhou (Haikou), Nanjing, Zhenjiang, Hankou, and Jiujiang.

[16] *Fugu*, with *fu* meaning *attached* and *gu* meaning *share*, are literally *attached shares*.

[17] In a telephone interview, the local historian Wang Yidian described these as more like debt than equity.

securities did not expire, passed to heirs, and paid interest rather than dividends. This may well have sharpened incentives, but it also showed that the voting rules could change.

Li Wudian, Li Zhenshi's nephew and adopted son inherited his father's capital shares in 1891. Wudian continued selecting highly capable managers, but also sought to influence lending – a course his father avoided. In the 1910 grand assessment day, Wudian created yet another share class, awarding himself 1.7 *empty shares* [*konggu*], with full voting rights in grand assessment days but without the investment in silver associated with a capital share. Thus outvoting all other capital shareholders, Li made himself a vice-president and awarded himself one expertise share – making his voice equal to the general managers in expertise shareholder meetings.[18] The bank now had a controlling shareholder who was also a top insider. The other managers dared not oppose Li's lending decisions, for he controlled their jobs, expertise share allotment, and retirement benefits. When the general manager dared oppose Li, contradictory orders only added to a general confusion.

The bank's performance deteriorated – it lost money in 1911 and again in 1912 –and the other capital shareholders, Li's brothers, exercised their rights to withdraw their capital in silver. In desperation, Li ordered the bank to borrow from sources other than depositors.

In 1914, the bank's Beijing manager was unable to make good his guarantee of a debt of the failed Heshengyuan Bank, and fled to Shanxi. A warrant was issued for the arrest of the Sunrise Provident's capital shareholders, who still carried unlimited liability. In 1915, under the new civil code, the creditors became the banks' new common shareholders and withdrew the charges against the Li brothers. As an act of charity, the new owners granted the Li brothers a thousand silver dollars per year. The reorganized Sunrise Provident Bank, with a single equity class, lasted until 1932, when it closed at the height of the Great Depression.

## 3. The Financial Center

This saga of financial entrepreneurship leaves the odd placement in time and space of this financial center unexplained. The 1820s, when the banks took root, lie in the middle of a long era of isolation from the outside world, and Shanxi lies in China's remote northern interior.

### 3.1 Splendid Isolation

In 1823, when the Sunrise Provident was founded, the Silk Road, a caravan route from China to the Middle East, had long ago dried up. The Little Ice Age, an abnormally cold global climate from the $16^{th}$ to

[18] Some authors diplomatically dub *konggu* [lit. empty share] *privilege shares*.

the 19th century, desiccated northwest China and Central Asia, reducing populations already bled by the Golden Hoard and commerce already drained by banditry. By the late 1700, the Silk Road was all but impassable. Thus, Shanxi merchants did business in Xingjiang, the route's former entrepôt in western China, but none along the route itself. Western relic hunters of the 18th and 19th centuries describe ruins along the once magnificent trade route.

Maritime trade was also slowed to a drip. The Ming criminalized overseas trade, save from 1405 to 1433 when Admiral Zheng He charted the African coast. After Zheng's death, the next emperor destroyed the ships, burned his records, and banned ocean trade. In 1661, the Qing army sterilized a 50 li (16 km.) wide band along China's coast - levelling all buildings and marching all residents inland in three days – all to isolate rebels on Taiwan.[19] The band, thrice widened and marked by signs warning "Anyone found over this line shall be beheaded instantly", was patrolled by soldiers dispensing instant death to transgressors (Gu 2003). Coastal areas were resettled in 1683, and limited maritime trade resumed in 1685 in four ports – Guangzhou, Zhangzhou, Ningpo and Yuntai. In 1757, the Emperor Qianlong closed them all – precipitating the uninvited arrival of British ships in 1759 and Guangzhou's restricted reopening in 1760. Under the restrictions, the *cohong* system, select merchant groups [*kung hung*, hence *cohong*] bought quotas for trade with prescreened unarmed male foreigners on a riverbank outside the city wall during a limited "trading season" only.[20] Under constant observation and harassment by bribe-seeking officials, foreigners risked unpredictable fines, enthusiastic torture, arbitrary imprisonment, and instant death until 1842, when British victory in the First Opium War opened four more ports and established Common Law enclaves in all five.[21] Given this xenophobia, chronicles of the Shanxi banks understandably presume a purely Chinese provenance.

### 3.2 Original Sins

The most colourful, and least plausible explanation capitalizes the banks with gold and silver stolen from Ming treasury as that dynasty collapsed in the 1640s (Dong 1917; Chen 1937; Wei 1944); though a 1.5 ton (pre-Ming) coin hoard discovered at a Shanxi construction site in 2007 lends the notion unexpected credence.[22] Another argument has defecting 1640s Ming soldiers reappearing in Shanxi as private security to the region's merchants – a distinct edge under waning rule of law (Han 1921; Lu 1936; Wei 1944). Yet another blacklists locals from top civil service positions for Northern Song (960-1127) dissent

[19] A *li* (里) currently equals 500 meters. From the Tang until the late Qing, a *li* was 323 meters.
[20] Foreigners could reside year-round in Macau which, though on mainland China, was *de facto* a lonely Portuguese island.
[21] The 1842 Treaty of Nanking opened four more ports – Xiamen, Shanghai, Ningpo, and Fuzhou – and removed the onerous restrictions on foreigners in Guangzhou. The ports so opened were called *treaty ports*.
[22] See e.g. "1.5 Tons of Ancient Coins Discovered in North China" *People's Daily*, Aug 30, 2007, pp. 20-21.

or hiding 1640s Ming soldiers (Wei 1935), redirecting talent to commerce. While Shanxi locals are oddly absent from Qing top rank exam records (Xiao 2004), the dynasty's 19th century enthusiasm for the banks' services asperses this thesis somewhat (Fan 1935; Li 1937; Chen 1937).[23]

The most plausible explanation of Shanxi's financial prominence has its salt works at Lake Xiechi fostering mercantile activity that ultimately needed banks (Jun 1917; Miyazaki 1993). A state salt monopoly persisted, with minor interruptions, from the Han (206 BC to 220) until 1370.[24] That year, the army began using salt rights [*yan yin*], initially redeemable only at Lake Xiechi, to pay for transporting provisions to troops on the Great Wall (Wang 1789, cited in Zhang 1992). Shanxi merchants, handling this business from its outset, thus got a piece of the State's monopoly and the State quite likely netted more revenues because of higher overall efficiency. This policy remained in effect long enough for Shanxi merchants to accumulate substantial wealth.[25] It also accords with evidence that Shanxi was not an important commercial center until the Ming dynasty (Liang 2007).

Every study posits the banks' Chinese roots (Dong 1917; Han 1921; Fan 1935; Hou 1936; Lu 1936; Chen 1937; Wei 1944). This is plausible, for China has a long financial history. At least as early as the Southern Qi (420–589), pawnshops [*dangpu]* made secured loans (Peng 1954, trans. p. 244). These needed independent managers, fully responsible for their decisions, and appraisers, skilled at valuing collateral; and paid both with profit sharing, a practice Yang (1952, p. 73) argues the Shanxi banks copied.

Silver shops [yinpu] or exchange shops [duifang] long changed money: trading lengths of silk; bulk weights of gold, silver, and copper; standard quantities of wheat, rice, silk, and salt; and (in some periods) coins and paper money (Peng 1954). Difference currencies predominated in different eras. Coins and silk both served in the Tang (618–907), even as local governments' offices in the capital issued certificates of deposit [*fei qian* or *flying cash*] to merchants conducting long-distance trade.[26] The Song (960-1279) invention of paper money apparently replaced *flying cash*, but hyperinflation in the 1160s,

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[23] Qing ties to the banks raised concerns: e.g. an 1864 petition to the Emperor warning "The Shanxi banks, after becoming familiar with the system, may start to undermine local officials and corrupt our system" (Chen 1937, citing Xie 1864).

[24] *The Theory of Salt and Iron*, a Western Han (206-220) treatise by Kuan Huan, discusses state monopolies on salt and iron in terms of demand inelasticity; and Ye (2002) dates both monopolies to 119 BC. Ji (1996) describes a section entitled "Treatise on Food and Money" in the Tang dynasty (618-907) chronicle *New Tang History* stating that local governments, not the imperial government, controlled salt production from 618 to 758, and taxed it rather than producing it directly. In 758, an official named Liu Yan persuaded the imperial government to reclaim its salt monopoly

[25] In 1492, the *kaizhong* policy was superseded by a new *zhece* policy, which paid merchants in salt certificates for supplying the troops directly, rather than merely transporting government provisions to them (Liang 2007).

[26] Peng (1954), citing "Treatise on Food and Money" in the *New Tang History* 54 (Oyang et al. 1060), explains *that* "during emperor Xianzong's reign, because cash was scarce, the use of bronze utensils was again prohibited. At that time, when merchants came to the capital, they would entrust their cash to the local governments' representative offices, and to the various armies, commissioners and rich families, so as to lighten their burdens as they hurried away in all directions. When the tallies were matched, they could withdraw their money. This was called flying cash."

and again under the Ming in the 1440s so undermined confidence in fiat money that China abandoned the innovation around 1445. Thus, the latter Ming and Qing regressed to commodity money. Grand Secretary Zhang Juzheng's 1581 *single whip* tax reform, mandating payment in bulk silver only, reenergized the exchange shop business.

Counting houses [*guifang*, lit. *cupboard houses for saving*] and apothecaries offered savings accounts (Peng 1954, trans. p. 324), but without interest. The Tang Penal Code "made it a crime for a person to put to profitable use funds entrusted to him" (Peng 1954, trans. p. 326) – suggesting a black market in interest.

### 3.3 Foreign Contamination

Each of these institutions did something akin to banking, but none were banks. The sudden appearance of genuine banks in the late Qing may thus be a remarkable example of parallel evolution: perhaps similar economic conditions shaped similar contractual and organizational forms in China and the West. However, Shanxi merchants' trading patterns suggest their banks may derive from Western models after all. The Silk Road was choked off, and the ports were all but hermetically sealed; but across the Gobi desert from Shanxi, Tsarist Russia was wide open and "every year, Shanxi merchants transport countless silk, cloth, tea, sugar, cigarettes, and china to Lanzhou and Xinjiang; or, though Kyakhta to Russia; to their branches as far as Moscow … and St. Petersburg" (Liu et al. 2007, quoting Sui Yuan Tong Zhi Gao).

In fact, virtually all of the trade went through Kyakhta, a trading post created by the 1727 Kyakhta Treaty on Russia's border with Outer Mongolia, then part of China.[27] A Russian state monopoly and Qing requirements for the prior preclearance of all exports in Beijing initially kept trade to a trickle. But in 1755, the Qing dispensed with preclearance; and in 1762, Catherine the Great opened Kyakhta to private merchants, and the Tea Road soon boomed. By the mid-19th century long Boyar caravans, laden with Chinese tea for resale to Europe and America, snaked towards St. Petersburg; and the "merchants in Kyakhta were all Shanxi merchants" (Liu et al. 2007, quoting Sui Yuan Tong Zhi Gao) and "most of the merchants are Shanxi merchants" (Liu et al. 2007, quoting He 1860). The Tea Road made fortunes for Russian and Shanxi merchants until China's Opium War defeats reopened maritime trade.

Banks in tsarist Russian, though pressured to lend to court favorites and chronically unstable, took deposits, made loans (primarily to favored nobles), exchanged currencies and let merchants transfer funds to each other. But St. Petersburg, the site of the westernmost known Shanxi merchant

[27] Two other land portals, Zuluhaitu and Nerchinsk, were also officially opened to trade between Russia and China. However, they were both remote, inaccessible, and saw no significant trade activity.

operation, was also Russia's doorway to Europe, and hosted branches of major Western European banks, with British bankers especially important. Thus, Thompstone (2004) writes "For two centuries after the foundation of St. Petersburg in 1703, the British merchant community exercised a remarkable influence over the city's economic relations with the wider world. This community operated as a 'City of London' in miniature ...." He reports British merchant families in St. Petersburg numbering about 1,000 in the 1790s, rising to some 2,500 in the 1820s.

It seems plausible that Shanxi merchant in St. Petersburg might notice these banks. Li Daquan, running Xiyucheng dyed goods operations, organized silver shipments between Tianjin and Shanxi. These would have gone through Kalgan, where Kyakhta caravans passed beneath the Great Wall. Perhaps Li heard of banking from Shanxi merchants who had travelled to European Russia – and decided to try his hand at it. Amid Qing xenophobia, he would wisely omit mentioning a foreign model.

### 3.4 Ignoble Ends

After a string of humiliating military defeats and rebellions, the Qing launched genuine reforms as the new century opened: elected assemblies, railroad nationalizations, and civil service and army reform. The army, backed by provincial governors and railroad owners, revolted. Provinces seceded, and the rule of law fell away. Sun Yatsen returned in 1911 to declare a republic. His Kuomintang won a constitutional assembly election, but reactionaries seized power. Provinces again seceded, warlords carved out petty kingdoms, and for the next two decades China was a mere geographic region (Spence 1991). Over the next few years, the Shanxi banks either liquidated voluntarily or limped into bankruptcy.

Several factors worked to their demise: Foreign banks in treaty enclaves benefited from relative rule of law and legal innovations such as limited liability. Rival Chinese banks gain similar flexibility under a 1901 German Civil Code (Kirby 1995; Goetzmann and Köll 2005), and other took root in the foreign enclave despite legal discrimination (Liang 1930, p. 17). Railroads and telegraph lines let all such entrants establish rival account clearing operations. Their lower costs let these upstarts pay more interest and charge less for loans than the Shanxi banks (Li 1917; Wei 1944). Meanwhile, the Shanxi banks' cash cows – interest-free government deposits and intergovernmental transfers – evaporated, there being no government to speak of. The only institutional improvement that stuck, the standardized the currency, merely ended their domestic currency exchange business. As rising chaos overwhelmed the country, the Shanxi banks' borrowers defaulted. Lacking collateral – reputation had always been enough – and unprotected by limited liability, the banks' capital shareholders and managers, by dint of the indemnification clauses in their employment contracts, faced the full losses.

# 4. Learning from History

The Shanxi banks present two intriguing puzzles. One is geographic: Why did a banking center arise in a remote northern inland province – akin to America's financial center being in Fargo, North Dakota, rather than Manhattan. The other is temporal: How did such a close parallel to contemporary Western banks arise in this era of xenophobia, isolation, and relative institutional decay? While the second puzzle leads most to posit purely Chinese solutions to the first, we offer an alternative explanation.

China's traditional trade routes – the Silk Road and its maritime ports – were indeed largely sealed off against foreign influence; but Shanxi merchants ran a booming tea trade across the Gobi desert, through Siberia, to St. Petersburg. They alone could leave and re-enter China freely, and while in the Russian capital, they surely observed both Russian banks and the large colony of British banks located there. Were America's only access to the outside world a North Dakota border crossing, its financial capital might well have developed in Fargo. We thus posit that the Shanxi banks exemplify institutional diffusion, not parallel evolution.

Nonetheless, the Shanxi banks were uniquely Chinese models of corporate governance. To illustrate, we describe the dual class equity of the Sunrise Provident Bank, the first and largest Shanxi banks. Its managers (expertise shareholders) voted in more frequent meetings advising the general manger on lending and strategy. Its owners (capital shareholders) voted only on top managers' retention and expertise share allotment at the end of each three or four-year fiscal cycle. Since both share classes paid the same dividend, and insiders' compensation was primarily dividends from expertise shares, managers' incentives were well aligned with owners' wealth maximization. Since capital shareholders could not influence lending, their social obligations could not skew lending.

This neatly inverts modern dual class equity, which magnify the voting power of insiders and disfranchise other shareholders. Modern lawmakers, regulators, and firms might consider the Shanxi bank's approach: Firms might pay insiders expertise shares, with no votes at shareholder meetings. Controlling shareholders might augment their wealth by adopting corporate charter amendments that bar them from influencing business decisions, and let them only hire and fire top executives and set formulas that determine their pay.

Another potentially imitable Shanxi practice is a fiscal cycle three or four years long: tax and accounting rules mandate quarterly and annual disclosure, but longer fiscal cycles for managerial compensation purposes merit consideration. Yet another is dead shares for top executives who retire in good standing – or expire at their desks. These pay dividends for a set number of years and then expire, commending the executive's attention towards long-term profits and providing his retirement and immediate heirs, yet not bequeathing voting rights. Top managers might merit votes at lending and strategy meetings, but these need not persist after retirement nor pass to heirs.

Finally, in the aftermath of the 2008 banking crisis, our readers' attention may linger on the banks' capital shareholders holding top managers' wives and children hostage. While these governance safeguards might displease civil libertarians, we find no instances of fraud by managers in any Shanxi bank at any time.

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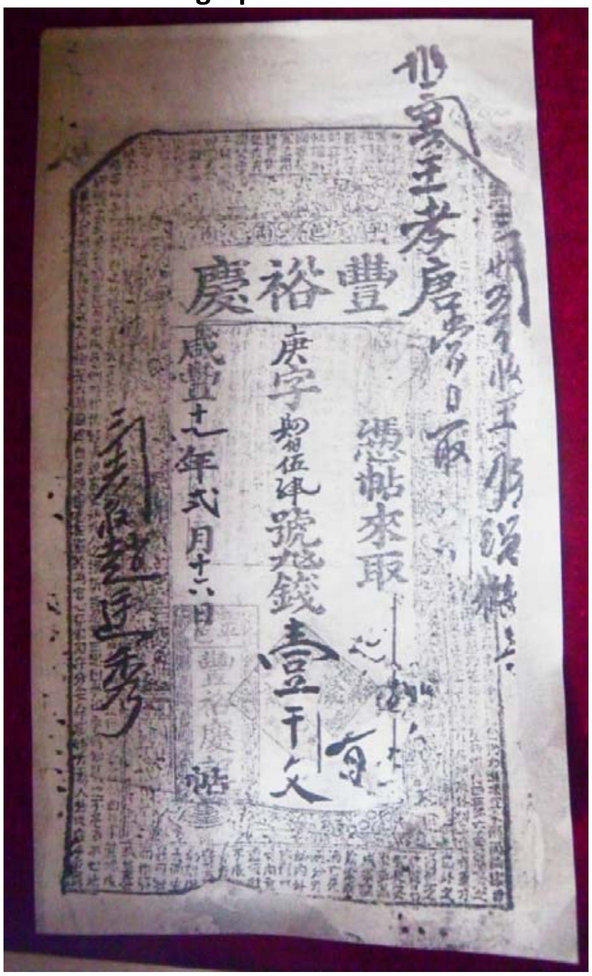
## Figure 1. A Bank Draft on the Feng Yu Qing Bank payable to Wang Xiaotang

**This bank draft is the form the Shanxi banks issued for ordinary clients. Although the depositor's name appears in the draft, it is payable to the bearer. (See Chen 1937)**

### Panel A. Photograph




### Panel B. Transcription [1]

| | |
|---|---|
| **豐裕慶** | **Feng Yu Qing Bank** |
| **王孝唐當日取** | **Withdraw on same date** |
| **凴帖來取** | **By presenting this draft to withdraw** |
| **庚字肆佰伍x號x錢** | **[internal note] [2]** |
| **一千文** | **1,000 cents** |
| **咸豐十一年二月十六日帖** | **Emperor Xianfeng's 11th year [1861] 2nd month 16th day** |

### Panel C. Translation

**By presenting this bank draft to the Feng Yu Qing Bank, Mr. Wang Xiaotang may withdraw cash in the amount of 1,000 cents after Feb. 16th 1861.**

**Notes**

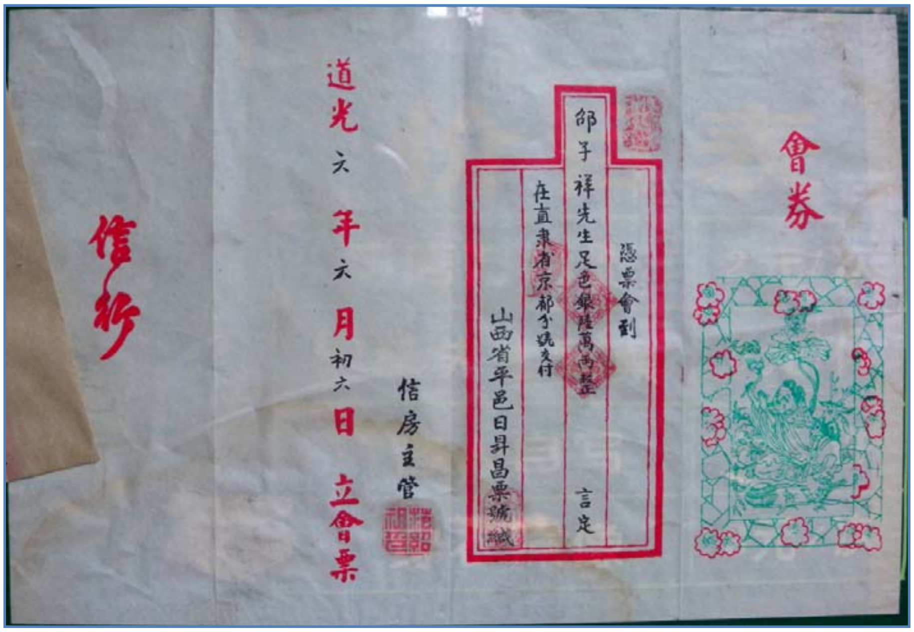
1. The smaller characters in the background are anti-fraud print.

2. The characters 庚字 represent the number 7 in the Chinese decimal counting system. 庚字肆佰伍x號x錢 indicates the form and purity of the cash, and that this may not to be disclosed to the client.

## Figure 2. A Bank Draft on the Sunrise Prudent Bank payable to Shao Zixiang

**This bank draft is the form issued for highly trusted long-term clients with large balances.**

**Panel A. Photograph**




### Panel B. Transliteration

| | |
|---|---|
| **會券** | **Draft** |
| **憑票會到** | **by presenting this draft** |
| **邵子祥先生足色銀陸萬兩整** | **Mr. Shao Zixiang 24 carat[1] silver 60 thousand tael** |
| **言定** | **promises to** |
| **在直隶省京都分號交付** | **withdraw at the Beijing Branch of the Sunrise Prudent Bank** |
| **山西省平邑日昇昌票號緘** | **sent by Shanxi, Pingyao, Sunrise Prudential Bank headquarters** |
| **信房主管（印）** | **by the Chief of the Letter Office** |
| **道光六年六月初六日立會票** | **Emperor Daoguang's 6th year [1826] 6th month and 6th day completed this bank draft** |
| **信行** | **by mail** |

### Panel C. Translation

**Mr. Shao Zixiang deposited 60 thousand Tael of 24 carat[1] silver in Shanxi, Pingyao at the Sunrise Prudent Bank Pingyao headquarters and would withdraw this amount at the Beijing Branch of the Sunrise Prudent Bank by presenting this bank draft. This draft is prepared by the Chief of the Letter Office at June 6th, 1826, and will be sent by mail.**

Note: Anti-fraud marks include the green stamp and smaller red stamps superimposed.

1. The Chinese 足色 means 100%, however this is technologically infeasible. Twenty-four carat is 99.99% purity.

## Figure 3.  Note of Loan – Blank Form

**The bank used this form to record loans by one party to another. The "form of cash" here is the local *yuan*, and the contract specifies that no other form of cash be substituted for repayment.**

**Panel A. Photograph**

錢業公會公製借券
今借到
現銀圓
言明
行息期限
依照原借款現銀圓本利一並歸還
不得以他項代替以招信用此據
經手人
民國 年 月 日

**Panel B. Transliteration**

**錢業公會公製借券 Finance guild public loan sample**

**今借到[creditor] Today obtained loan from [creditor]**

**現銀圓[amount]圓整 Cash silver [amount] Yuan exactly.**

**言明 Agreed to**

**行息期限 [rate & maturity] 依照原借款現銀圓本李一並歸還**

**interest and term[rate & maturity]based on principal and interest completely repaid**

**不得以他項代替以招信用此據**

**There to be no substitution of alternate forms of cash for repayment. This form serves as evidence.**

**經手人[banker] Prepared by[debtor]**

**民國 年 月 日 Date [year, month, day]**

**Panel C. Translation**

**Today I obtained from [creditor's name] silver yuans in the amount of [amount of loan]. I agree to an interest rate of [interest rate] and to the payment in full on [date] of both principal and all interest and not to substitute any other medium of exchange. This form is evidence of agreement to the loan on these terms. Prepared by the debtor [debtor's name] on [date].**

## Figure 4. Record of a Recurring Account Transfer

**Panel A. Photograph**


**Panel B. Transliteration**

**同治八九十十一年十月十七日**

**Emperor Tongzhi's 8th, 9th, 10th and 11th years, the 10th month and 17th day**

**來往暫記帳**

**Interim record of account transfer**

**Panel C. Translation**

**Interim record of account transfer as of 1869, 1870, 1871 and 1872, on October 17th of each year.**

## Figure 5.  Record of a Deposit

**Panel A. Photograph**

**Panel B. Transliteration**

| | |
|---|---|
| **錢票** | **Money draft** |
| **收張萬禎** | **Received from Zhang Wanzhen** |
| **捌佰參肆號錢一千文** | **[Type of cash][1] 1,000 coins** |
| **光緒元年十月初七** | **Emperor Guangxu's 1st year, 10th month, and 7th day** |

**Panel C. Translation**

**On October 7th 1875, the bank received from Zhang Wanzhen 1000 unites [of a specific type of cash].**

Notes

1. In this era, China lacked a uniform system of cash. Payments were in silver, bronze, or copper coins, valued by their weight and purity. The "type of cash" here refers to the standards of weight and purity of the 1,000 silver, copper or bronze.