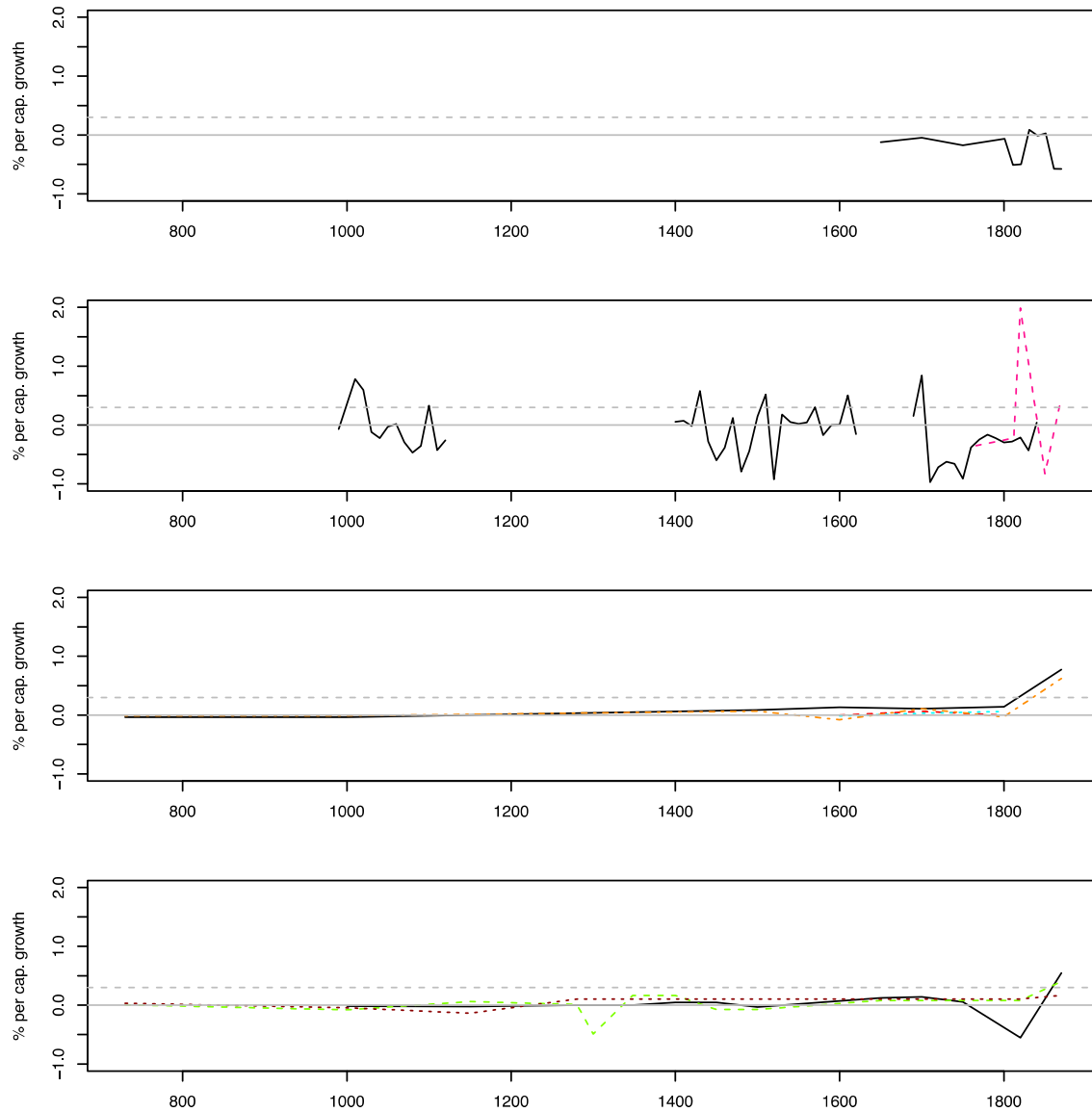


**Table A1: Estimates of annual GDP per capita growth**

Case/place	Date range	Growth (%)	Source
Mesopotamia	-	-	-
The Hebrews	-	-	-
Athens	800 to 300 BCE	0.07 to 0.14	Morris 2004: 726.
Athens	800 to 300 BCE	0.15	Ober 2015: ch. 4.
Athens	600 to 400 BCE	0.1	Ober 2015: ch 4.
Athens	400 to 300 BCE	0	Ober 2015: ch 4.
Rome	Prior to 200 BCE	-	-
Rome	200 BCE to 100 CE	0.1	Saller 2002: 265 (=2005: 235).
Rome	150-50 BCE	0.54	Kay 2014: 291-297, 334.
India	Prior to 1600 CE	-	-
India	1600 to 1870 CE	See fig. 1	Bolt et al 2018.
China	Prior to 980 CE	-	-
China	980 to 1840 CE	See fig. 1	Broadberry et al 2018: 994.
China	1661 to 1870 CE	See fig. 1	Bolt et al 2018.
Christianity (Western Europe)	1 to 1000 CE	-0.03	Maddison 2001.
Christianity (Western Europe)	1 to 1000 CE	-0.01	Lo Cascio and Malanima 2009.
Christianity (Western Europe)	1000 to 1870 CE	See fig. 1	Maddison 2001; Van Zanden 2005; Alvarez Nogal and Prados de la Escosura 2007; LoCascio and Malanima 2009.
Christianity (Eastern Orthodox Greece)	1 to 1833 CE	0.01	Bolt et al 2018.
Islam: Iraq and Egypt	730 to 1870 CE	See fig. 1	Bolt et al 2018.
Islam: Turkey	1000 to 1870 CE	See fig. 1	Bolt et al 2018.
The Nahua ('Aztec')	-	-	-
The Tolai	1959 to 1961 CE	0	Epstein 1968: 33 (a fieldnote).

Notes: Though estimates are tentative and sometimes controversial, there is little dispute that prior to the nineteenth century CE growth rates rarely exceeded 0.3% by much or for very long. A dash (-) indicates cases where we have found no estimates, though we found nothing to suggest growth might have exceeded the rates estimated for other cases.

**Fig A1: Estimates of annual GDP per capita growth**



Data sources in Table A1. Horizontal grey lines indicate 0% growth (solid) and 0.3% growth (dotted). For China: solid black line is based on Broadberry et al. (2018); pink dashed on Bolt et al (2018). For Western Europe: solid black line is based on Maddison (2001); red dashed line on van Zanden (2005); cyan dotted line on Alvarez Nogal and Prados de la Escora (2007); and dot-dash orange line on Lo Cascio and Malanima (2009). For Islam: solid black line based on data for Turkey; dashed green line Egypt, dotted red line Iraq, all in Bolt et al (2018). Drawn using R Core Team (2019).

**Table A2: Absence/presence of interest-bearing loans**

Case/place	Date	Absent or present	Documentary source	Secondary source
Mesopotamia (Sumer: Lagash)	c.2500 BCE	Present		Hudson 1993:73 (citing Steinkeller 1981).
The Hebrews	c.1400 BCE	Possibly present		Hudson 1993: 72 (citing Diakonoff 1982).
The Hebrews	11 <sup>th</sup> -7 <sup>th</sup> century BCE	Present	Leviticus.	Grabbe 1993, Hudson 2002.
Greece	7 <sup>th</sup> century BCE	Absent/optional	Hesiod <i>Works and Days</i> ll.349-51.	Millett 1991: 32-33, 46 (citing Korver 1934: 63).
Athens	c.475 BCE	Present	Pindar's poetry.	Millett 1991: 36.
Athens	423 BCE	Present (including compound interest)	Aristophanes <i>Clouds</i> ll.115-6; ll.1286-97.	Millett 1991: 46, 185 (citing Dover 1968).
Rome	6 <sup>th</sup> century BCE	Present	Dionysius of Halicarnassus, <i>Roman Antiquities</i> , 4.9.6-8.	Savunen 1993: 145n16.
Rome	494 BCE	Present	Livy 2.23.	Savunen 1993: 145.
India	14 <sup>th</sup> -12 <sup>th</sup> century BCE	Probably absent	Rigveda 10.34.10; AV. 6.117-9.	Kosambi 1996: 147-148.
India	5 <sup>th</sup> -4 <sup>th</sup> century BCE	Present	Pānini V.I.47, IV 4.30.	Chatterjee 1971: 21.
India	5 <sup>th</sup> -4 <sup>th</sup> century BCE	Present	Jātaka IV, 422, 184.	Rhys Davids 1922: 205.
China	5 <sup>th</sup> -3 <sup>rd</sup> century BCE	Present		Von Glahn 20166: ch.4 (citing Yamada 2000: 45).
China	206 BCE – 25 CE	Present	Han Shu 91.11a, 15A.23a, 15B.30b.	Yang 1971: 5.
Pre-Roman, pre-Christian Europe* <sup>1</sup>	1 <sup>st</sup> century CE	Absent	Tacitus <i>Germania</i> 26.	Hudson 2000a: 146.
Pre-colonial West Africa*	1745 CE	Absent	Governor Billsen (trans. Manley in Justesen ed. 2005).	Quoted in Spicksley 2013: 151n23.
Pre-colonial West Africa*	1760 CE	Absent	Rømer 1760 (trans. Winsnes 2000).	Quoted in Spicksley 2013: 156.
Ashanti/e (Ghana, West Africa)*	c.1869 CE	Present		Austin 2005: 144-145.
Ashanti/e (Ghana, West Africa)*	18-19 <sup>th</sup> century CE	Present		Law 1999: 37, citing Austin 1993: 103-4.
The Nahua	1541 CE	Perhaps present	Motolina.	Millhauser 2017: 267, Hirth 2016: 234.
The Nahua	1570 CE	Present	Marginal notes in Zorita 1570.	Millhauser 2017: 267; Hirth 2016: 268.
The Nahua	1571 CE	Present	Molina 1571: 1:78v, 2:153v, 2:41v.	Millhauser 2017: 267; Hirth 2016: 244-247.
The Nahua	1576 CE	Present	Sahagún [1576] 1950–82, 10:41, 43, 59.	Millhauser 2017: 267.
The Tolai	19 <sup>th</sup> century CE	Present	Danks 1888, Parkinson 1907.	Connell 1977, Epstein 1968.

<sup>1</sup> An asterisk (\*) denotes events not included in our paper since they occur in times or places beyond our case studies. We list them here to provide some context, and to aid future research.

**Table A3. Debt forgiveness (general jubilees and debt remissions)**

Case/place	Date	Event/law	Documentary source	Secondary source
Mesop. (Sumer: Lagash and Umma)	c.2400 BCE	Debt cancellation	Edict of Enmetena, ruler of Lagash.	Hudson 1993: 68 (citing Kraus 1984 and Edzard 1957).
Mesop. (Sumer: Lagash and Umma)	c.2350 BCE	Uruinimgina's debt cancellation	SARI La 9.1 clay cone, and La 9.3 clay plaque.	Hudson 1993: 16, 74.
Mesop. (Sumer: Lagash and Umma)	c.2130 BCE	Gudea's New Year debt cancellation	Statue B, Cylinder B.	Hudson 1993: 16-17, 72.
Mesop. (Ur III including Elam (Susa), Ashur, and Mari)	c.2100 BCE	<i>Nig-šiša</i> debt cancellation by Ur-Nammu, during his reign		Hudson 1993: 46.
Mesop. (Ur III including Elam (Susa), Ashur, and Mari)	c.2090 BCE	Shulgi's debt cancellation		Hudson 1993: 46.
Mesop. (Ashur)	c.1900 BCE	<i>Andurarum</i> debt cancellation		Hudson 1993.
Anatolia, Karum Kanesh, Cappadocia (a trade colony of Ashur)*	1900-1800 BCE	<i>Hubullum masa'um</i> (debt cancellations)	Cuneiform tablets.	Hudson 1993: 19 (citing Kemal Balkan 1974: 30 for interpretation of cuneiform tablets).
Mesop. (Assyria)	1993 BCE	<i>Andurar</i> by Ilushuma (debt cancellation)	Building inscription.	Quoted in Hudson 1993: 19 (citing Kraus 1984: 103).
Mesop. (Assyria)	1974 BCE	<i>Andurar</i> by Erishum (debt cancellation)	Building inscription (BM 115689, Ass. 16850, in J. E. Reade, 2001).	Quoted in Hudson 1993: 19 (citing Kraus 1984: 103).
Mesop. (Sumer: Lagash)	1974 BCE	<i>Nig-siša</i> by Iddin-Dagan (debt cancellation)		Hudson 1993: 18 (citing Edzard 1957 and Kraus 1984).
Mesop. (Sumer: Lagash)	1953 BCE	<i>Nig-siša</i> by Ishme-Dagan, probably upon taking the throne.		Hudson 1993: 18 (citing Edzard 1957 and Kraus 1984).
Mesop. (Sumer: Lagash)	1934 BCE	<i>Nig-siša</i> by Lipit-Ishtar, fifth ruler		Hudson 1993: 18.
Mesop. (Sumer: Lagash)	1923 BCE	<i>Nig-siša</i> by UR-Ninurta		Hudson 1993: 18.
Mesop. (Sumer: Larsa)	c.1822-1763 BCE	Rim-Sin		Hudson 1993: 19 (citing legal contracts in Kraus 1958: 201ff and 1984: 31ff).
Mesop. (Sumer: Larsa)	c.1822-1763 BCE	Rim-Sin's second debt cancellation		Hudson 1993: 18.
Mesop. (Sumer: Larsa)	c.1822-1763 BCE	Rim-Sin's third debt cancellation		Hudson 1993: 18.
Mesop. (Der)	Before 1802 BCE	<i>Misharum</i> (debt cancellation) by Nidusha, ruler of Der		Hudson 1993: 19.
Mesop. (Hana)	Not clear	Debt cancellation		Hudson 1993: 19.
Mesop. (Eshnunna)	Not clear	Debt cancellation		Hudson 1993: 19
Mesop. (Mari)	c. 1800 BCE	Contract attempting to circumvent a future <i>andurarum</i>	ARM 8 33.	Hudson 1993: 39.
Mesop. (Mari)	1775-1761	Shunuhrrarahalu (a local		Hudson 1993: 25 (citing

	BCE	chieftain) proclaims <i>andurarum</i>		Charpin 1987: 41).
<b>Mesop. (Babylonia)</b>	1880 BCE	<i>Misharum</i> by second ruler, Sumulael		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1812 BCE	Sin-Muballit on accession		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1803 BCE	Sin-Muballit		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1797 BCE	Sin-Muballit		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1792 BCE	Hammurapi on accession		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1780 BCE	Hammurapi after local victories		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1771 BCE	Hammurapi after another military victory		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1762 BCE	Hammurapi on the 30th anniversary of his rule, and on the defeat of Rim-Sin		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1749 BCE	Samsuiluna on his accession	A letter by Samsuiluna.	Hudson 1993: 23.
<b>Mesop. (Babylonia)</b>	1741 BCE	Samsuiluna		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1711 BCE	Abi-Eshuh, on his accession		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1683 BCE	Ammititana, on his accession		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1662 BCE	Ammititana		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1647 BCE	Ammititana		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1646 BCE	Ammisaduqa on his accession		Hudson 1993.
<b>Mesop. (Babylonia)</b>	1636 BCE	Ammisaduqa	5.5-6, in ANET (esp. lines 36-41).	Quoted in Hudson 1993 : 24.
<b>Nuzi (upriver from Babylon)*</b>	1500-1400 BCE	Various debt cancellations (' <i>shudutu</i> ')	<i>Ennamati</i> contracts, and subsequent similar contracts.	Hudson 1993: 26.
<b>Babylonia*</b>	680-669 BCE	Andurarum debt cancellation proclamation by Esharhaddon		Hudson 1993: 32 (citing Lambert 1965 translation).
<b>Egypt*</b>	663-609 BCE	Psammeticus I debt cancellation		Hudson 1993: 50.
<b>Egypt*</b>	192 BCE	Debt cancellation by Ptolemy V on coming of age		Hudson 1993: 31.
<b>Hebrew law, Levant</b>	587 BCE	Zedekiah frees Jewish debt-slaves cancelling their debts	Jeremiah 34:8-19; 2 Chronicles 32; 2 Kings 25.	Hudson 1993: 12, 48.
<b>Hebrew law, Levant</b>	586-539 BCE	Jubilee year cancels debts and redistributes land	Leviticus, Deuteronomy 31:10.	Hudson 1993: 33.
<b>Hebrew law, Levant</b>	444 BCE	Nehemiah's debt remittance and release of lands	Nehemiah 5:3-5.	Hudson 1993: 34.
<b>Hebrew law, Levant</b>	433/432 BCE	Nehemiah's debt remittance and release of lands	Nehemiah 5:3-5.	Hudson 1993: 34, 48.
<b>Hebrew law, Levant</b>	131 BCE	Hasmonians liberate Israel from yoke of	I Maccabees 13-14.	Hudson 1993: 48.

		debts and taxations		
<b>Hebrew law, Spain</b>	13 <sup>th</sup> century CE	Sabbatical jubilees	Maimonides, Ibn Adret.	Hudson 1993: 38 (citing Neuman 1942: 219f and 29).
<b>Sparta (Greece)*</b>	820 BCE	Lycurgan reforms: land made inalienable, money banned		Hudson 2000b: 2.
<b>Olbia (Greece)*</b>	7 <sup>th</sup> century BCE	Debt cancellations after overthrow of elites		Hudson 1993: 81.
<b>Miletus (Greece)*</b>	7 <sup>th</sup> century BCE	Debt cancellations after overthrow of elites		Hudson 1993: 81.
<b>Corinth (Greece)*</b>	657 BCE	Cypselus cancelled rural debts, having exiled ruling Bacchiads		Hudson 1993: 32.
<b>Sicyon (Greece)*</b>	7 <sup>th</sup> century BCE	Cleisthenes cancelled debts		Hudson 1993: 32.
<b>Megara (Greece)*</b>	6 <sup>th</sup> century BCE	Debts cancelled (the 'palintokia')	Plutarch <i>Greek Questions</i> Q18.	Millett 1991: 49-50; Hudson 2000a; Hudson 1993: 32.
<b>Athens (Greece)</b>	594 BCE	Solon's debt cancellation (the 'seisachtheia')	Solon fragment 24; Plutarch <i>Solon</i> 13-14, 19.	Asheri 1969: 9ff (citing many additional ancient sources).
<b>Athens (Greece)</b>	403 BCE	Apparently a refusal by the Thirty Tyrants to cancel debts	Andocides 1.88.	Asheri 1969: 20-21.
<b>Athens (Greece)</b>	353 BCE	A proposal that debtors to the treasury remain at liberty if they provide guarantees	Demosthenes <i>Against Timocrates</i> 24.39.	Asheri 1969: 31-33; Arnaoutoglou 2009: 79-8.
<b>Sparta (Greece)*</b>	220-200 BCE	Cleomenes and Nabis, kings, cancel debts		Hudson 1993: 50.
<b>Rome</b>	460 BCE	Herdonius proposes a debt cancellation (doubtful)	Dionysius of Halicarnassus, <i>Roman Antiquities</i> , 4.6-8; (Livy 3.15-18 refers to Herdonius but not to any cancellation proposal).	Savunen 1993: 145n14.
<b>Rome</b>	385 BCE	M. Manlius Capitolinus pays others' debts and proposes interest should be written off	Appian <i>Ital.</i> 9; Plutarch <i>Cam.</i> 36.3, Plutarch <i>De Vir</i> III 24.5, Livy 6.11, 6.14, 6.15-16.	Savunen 1993:145-146
<b>Rome</b>	367 BCE	Interest written off ( <i>lex de aere alieno</i> , part of the <i>lex Licinia Sextia</i> )	Livy 6.35.4.	Cornell 1989: 333-7; Savunen 1993: 147.
<b>Rome</b>	352 BCE	A bank panel set up ( <i>Viris mensariis creandis</i> ), resolving claims using funds from the treasury or by awarding debtors' estates to creditors	Livy 7.21.5-8.	Connell 1989: 333; Savunden1993: 152; Bernard 2016: 329-330; Elster 2003: 28-29.
<b>Rome</b>	342 BCE	Possible law ( <i>lex Valeria</i> ) cancelling debts	Appian (Sam. 3.1.2, <i>De Vir</i> III 29.3)	Savunen 1993:144; Elster 2003: 37-39.
<b>Rome</b>	287 BCE	Possible law ( <i>de aere alieno minuendo</i> ) cancelling debts	Cassius Dio 8.37.2; Zonaras 8.2; Livy <i>Periochia</i> 11.	Savunen1993: 156; Elster 2003: 119-120.
<b>Rome</b>	217 BCE	Possibly a debt cancellation, though more likely a currency devaluation ( <i>Lex Flaminia minus solvendi</i> )	Festus (partial reconstruction in Cassola 1962: 302 and Elster 2003: 193).	Cassola 1962: 302; Elster 2003: 193-4.

<b>Rome</b>	216 BCE	<i>Lex Minucia de III viris mensariis</i> (a finance panel, perhaps similar that of 352 BCE; referred to again 214 and 210 BCE).	Livy 23.21.6, 24.18-12, 26.36.8.	Elster 2003: 209 (also listed in Rotondi 1912: 99 <sup>2</sup> ).
<b>Rome</b>	104 BCE (or possibly as early as 352 BCE)	<i>Lex Marcia de fenore</i> allowed lenders to be compelled to refund the interest they had collected.	Gaius <i>Institutions</i> 4:23.	Savunen 1993; Elster 2003: 458-459 (both also discuss the dating).
<b>Rome</b>	86 BCE	<i>Lex Valeria de aera alieno</i> remits 3/4 of Roman debts	Sallust <i>Catalina</i> 33; Cicero <i>Pro Fonteio</i> 1; Velleius Paterculus, ii. 23; Pliny <i>Natural History</i> . xxxiii. 3.	Hudson 1993: 52.
<b>Rome</b>	49 BCE	<i>Lex Iulia de pecuniis mutuis</i> (including <i>cessio bonorum</i> bankruptcy provision and remission of interest)	Suetonius <i>Julius Caesar</i> 42; Cassius Dio 41.47; possibly mentioned in Plutarch <i>Caesar</i> 37.1.	Mommsen 1894: V.398; Hudson 1993: 52.
<b>Rome</b>	48-47 BCE	Attempts at debt cancellations by Publius Cornelius Dolabella	Cassius Dio. 42.29, 42.32; Livy <i>Periochia</i> 113.5.	Hudson 1993: 52; Rotondi 1912: 99 (who lists perhaps four attempts).
<b>Rome</b>	41 BCE	Possibly a law to cancel debts ( <i>lex Iulia de mercidibus hab. annuis</i> )		Listed in Rotondi 1912: 99.
<b>China</b>	Warring States (5 <sup>th</sup> -3 <sup>rd</sup> century BCE)	Little expectation of repayment of emergency loans		Von Glahn 2016: ch.5n51 (citing Okada 1990).
<b>China</b>	3 <sup>rd</sup> century BCE	Individual creditors forgive debts	Zhan guo ce 'Strategems of Qi' 4, and Shi Ji 'Basic Annals of Emperor Gao Zu.	Peng 1993: 105-106; Von Glahn ch.5n51 (citing Okada 1990).
<b>China</b>	1 <sup>st</sup> century BCE	An individual creditor, Fan Zhong, forgives millions of coins in debts	Hou Han shu 32.1119; Fan Ye.	Von Glahn 2016: ch.4, (citing Wilbur 1943: 212-13, Gao Min 1986: 55-6, and Inaba 1984: 95-8, 105-07).
<b>China</b>	40 BCE	Emperor Yuan edict forgiving poor people's debts	Han Shu 9, 'Annals of Emperor Yuan'.	
<b>China</b>	420-479 CE	Head of commandery (prefecture) extra-judicially destroys debts	Liu-Song History, 81, 'Biography of Gu Kaizhi'.	Peng 1993: 286.
<b>China</b>	c.550-577 CE	An individual creditor forgives debts	Northern Qi History, 22, 'Biography of Li Yuanzhong'.	Peng 1993: 286.
<b>China</b>	1240 CE	Government pays off debts owed to Uighurs by officials and by commoners	Yuan History: 2 'Annals of the Emperor Taizong' 12th year.	Peng 1993: 625.
<b>China</b>	1738 CE	Government writes off interest-bearing pawn shop loans after an earthquake	Qing Emperor Gaozong Veritable Record, 88.	Peng 1993: 943.
<b>Islam</b>	7 <sup>th</sup> century CE	Individual creditors recommended to forgive debts	Quran 2:280.	Hunwick 1999: 80.

<sup>2</sup> For another four Roman laws we lack details: a *Lex Iunia de feneratione* for 192(?) BC (Rotondi 1912: 99; Elster 2003: 313 citing fragments from Festus), a *Lex Porcia (fenebris?)* for 118 BC, a *Popilia de nexis* for 81 BC, and a rogation *de aere alieno et agrarian* for 63 BC (these three listed in Rotondi 1912: 99, citing Billetter 1898 and Klingmüller 1902).

**The Tolai**      19<sup>th</sup> century CE      Social pressure to forgive loans      Epstein 1968: 72.

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**United Kingdom**      1869 CE      Law allowing voluntary bankruptcy      Bankruptcy Act.      Geisst 2013: 148.

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**United States of America**      1898 CE      Law allowing voluntary bankruptcy      National Bankruptcy Act.      Geisst 2013: 179.

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**Table A4. Bans on interest (including proposed and partial bans)**

Case/place	Date	Event	Documentary source	Secondary source
The Hebrews, Levant	11-7 <sup>th</sup> century BCE	Ban on interest on loans to the poor	Leviticus 25:36-37.	Issler 2016; Gordon 1975:75-76; Cornell 2006.
The Hebrews, Levant	8 <sup>th</sup> -5 <sup>th</sup> century BCE	Ban on interest on loans to the poor	Exodus 22:25.	Issler 2016; Gordon 1975:75-76; Cornell 2006.
The Hebrews, Levant	7 <sup>th</sup> -5 <sup>th</sup> century BCE	Bans on interest on loans to 'brothers'	Deuteronomy 23:19-20.	Gordon 1975:75-76; Cornell 2006.
The Hebrews, Levant	6 <sup>th</sup> century BCE	Ban on interest	Ezekiel 18:8, 13, 17, and 22:12.	
Athens	c.360 BCE	Proposal to ban interest (not enacted)	Plato <i>Laws</i> : 742c.	Geisst 2013: 19.
Rome	342 BCE	Interest ban ( <i>lex Genucia de fenertione</i> )	Livy 7.42.1 (perhaps also referred to in Appian <i>Civil Wars</i> 1.54.232 and Tacitus <i>Annales</i> 6.16).	Savunen 1993: 149-150; Cornell 1989: 333; Hudson 1993: 50.
Sardinia (Roman province)	198 BCE	Cato the Elder expels money lenders	Livy 32.27.	
Roman provinces	67 or 58 BCE	Ban on lending at interest to foreign ambassadors and friendly kings ( <i>lex Gabinia</i> )	Cicero <i>Atticus</i> 5.21.	Kay 2014: 195; listed in Rotondi 1912: 99.
India <sup>3</sup>	Mid 3 <sup>rd</sup> century BCE	No interest due if debtor imprisoned, creditor refuses repayment, or creditor holds a usufructary pledge	Gautama.	Chatterjee 1971: 64.
India	Mid 2 <sup>nd</sup> century BCE	No interest due during calamities such as famine	Prajapati.	Chatterjee 1971: 64.
India	Mid 2 <sup>nd</sup> century BCE to 1 <sup>st</sup> century CE	No interest from death of one King until coronation of the next	Vasistha.	Chatterjee 1971: 64.
India	Perhaps mid 1 <sup>st</sup> century CE	No interest during long sacrifices, disease, when under pupillage	Kautilya's <i>Arthashastra</i> .	Chatterjee 1971 :64.
India	4 <sup>th</sup> -5 <sup>th</sup> century CE	No interest when credit refuses to accept repayment	Yājñavalkya.	Chatterjee 1971: 64.
India	5 <sup>th</sup> -6 <sup>th</sup> century CE	No interest to friends for 6 months	Narada.	Chatterjee 1971: 64.
India	5 <sup>th</sup> -6 <sup>th</sup> century CE	No interest on price of commodities, wages, deposits, fines, lost and found, idle promises, and gambling winnings	Narada.	Chatterjee 1971: 65.
India	7 <sup>th</sup> -8 <sup>th</sup> century CE	No interest on hides, crops, wine, bride-price of women, debt by suretyship	Kātyayāna.	Chatterjee 1971: 65.
India	Uncertain <sup>4</sup>	No interest on suretyship, where there	Vyāsa.	Chatterjee 1971: 67.

<sup>3</sup> As in the main text of our paper, we restrict our entries on Indian law to indicating some key texts. A more comprehensive list of Indian legislation can be found in Kane (1973) and Chatterjee (1971).

<sup>4</sup> Dates for Vyāsa and Hārīta are uncertain as the texts are not extant, they are known only through citation by later authors (Davis and Brick 2018: 38).

		is enjoyment of pledge, when creditor refuses repayment, on fines, and on bride-price		
<b>China</b>	2 <sup>nd</sup> century BCE	Interest ban on private debts		Von Glahn 2016: ch.3 (citing Zhu Honglin 2008: 151-54).
<b>Christianity</b>	325 CE	Churchmen banned from charging interest	First Council of Nicaea, Canon 17, in Tanner 1990: 14.	Geisst 2013: 20.
<b>Christianity</b>	345 CE	Interest ban extended to laymen	Canon 12 of the Council of Carthage.	
<b>Christianity (Western Empire)</b>	789 CE	Interest banned	Canon 36 of the Council of Aix.	
<b>Christianity (Frankish kingdom)</b>	789 CE	Interest banned for both laity and clergy	<i>Admonitio Generalis</i> of Charlemagne.	Gordon 1975: 144.
<b>Christianity (Holy Roman Empire)</b>	806 CE	Interest banned for both laity and clergy	Capitulary of Nijmegen, clause 11, clause 16.	Gordon 1975: 145 (quoting from Latouche 1961: 156).
<b>Christianity (Holy Roman Empire)</b>	850 CE	Interest banned	Pavia Synod.	Geisst 2013: 26.
<b>Christianity (England)</b>	Before 1066 CE	Interest banned (for Christian lenders) by Edward the Confessor.		Geisst 2013: 37n37 (citing Plowden 1797: ch.4: 125).
<b>Christianity (England)</b>	1215 CE	Interest banned on inherited debts while the heir is under age	Magna Carta, article 10.	Geisst 2013: 29.
<b>Christianity (England)</b>	1235 CE	Interest banned on inherited debts while the heir is under age	Statute of Merton.	Geisst 2013: 37 (citing Plowden 1797: ch.4: 125).
<b>Christianity (England)</b>	1275 CE	Interest banned under Edward I of England.		Geisst 2013: 30.
<b>Christianity (Catholic Church)</b>	1139 CE	Interest banned	Second Lateran Council (in Tanner 1990: 200).	Geisst 2013: 34.
<b>Christianity (Catholic Church)</b>	1179 CE	Interest banned	Third Lateran Council (in Tanner 1990: 223).	Geisst 2013: 34.
<b>Christianity (Catholic Church)</b>	1215 CE	Interest banned	Fourth Lateran Council (in Tanner 1990: 265).	Geisst 2013: 36.
<b>Christianity (Catholic Church)</b>	1245 CE	Interest banned	First Council of Lyons.	Geisst 2013: 38.
<b>Christianity (Catholic Church)</b>	1274 CE	Interest banned	Second Council of Lyon.	Geisst 2013: 38.
<b>Christianity (Catholic Church)</b>	1311 CE	Interest banned, and defenders of usury punished as heretics	Council of Vienne (in Tanner 1990: 385-386).	Geisst 2013: 46.
<b>Christianity (England)</b>	1552 CE	Interest banned under Edward VI of England.		Geisst 2013: 76.

**Table A5. Arrangements where interest income is spent not lent, thus preventing compounding<sup>5</sup>**

Case/place	Date	Event	Documentary source	Secondary source
Rome	Late 1 <sup>st</sup> -2 <sup>nd</sup> century CE	Loans from the emperor's personal treasury (the <i>fiscus</i> ) lent at 5 percent, with income used to support children in the small inland towns of Italy (the <i>alimenta</i> )	Corpus Inscriptionum Latinarum XI.1147.1.3, IX.1455 for emperors Trajan and Hadrian; Aurelius Victor <i>De Caesaribus</i> 12.4 only source to refer to the scheme under Nerva.	Duncan-Jones 1964: 123-124.
China	3 <sup>rd</sup> -2 <sup>nd</sup> century BCE	Local Official Coin Offices ( <i>quanfu</i> ) charged interest on loans and used it to cover expenses	Zhou li.	Peng 1993: 104; Von Glahn 2016.
China	1 <sup>st</sup> century CE	State (under Wang Mang) charged interest but without aim of making profit		Peng 1993: 288; Yang 1971: 94.
China	Before 594 CE (Sui period, before ban)	Interest used for public expenses	Sui History, 46, Biography of Su Xiaoci; Northern History, 75, 'Biography of Su Xiaoci' ; Sui History, 24, 'Treatise on Food and Money': Kaihuang 8.	Peng 1993: 289.
China	618-907 CE (Tang, every reign throughout dynasty)	Interest on government loans used to pay official salaries and government expenses		Peng 1993: 383; Yang 1971: 96 (citing Chū Ch'ing-yüan, 1940: 126-132).
China	960-1279 CE (Song)	Interest from 'Green Sprouts' government loans used for flood control, famine relief, frontier armies		Von Glahn 2016: ch.6; Peng 1993: 535.
China	1636-1912 CE (Qing)	Interest to be used for a purpose, as a rule, e.g. scholarships, famine relief, orphanages		Yang 1971: 99, (citing Abe Takeo: 15-31).
Christianity (Catholicism)	Early 14 <sup>th</sup> century CE	<i>Montes de pietatis</i> charge interest that covers only lending costs		Geisst 2013: 28.
Christianity (Catholicism)	1512-1517 CE	Fifth Lateran Council endorses <i>montes</i> charging interest on condition it is used to cover costs	In Tanner 1990 (6): 626-627.	Geisst 2013: 64.

<sup>5</sup> There is no suggestion that the intention behind any of these measures was to prevent the compounding of interest. In the Chinese and Roman cases, the intention was to use interest income to fund public projects. In the case of the Christian *montes de pietatis*, the intention was to provide cheap loans to the poor, and interest was permitted on the condition it was used to cover costs and did not harm the debtor.

**Table A6. Bans on charging compound interest<sup>6</sup>**

Case/place	Date	Event	Documentary source	Secondary source
China	618-907 CE (Tang)	Ban on compound interest (ban on <i>i-li wei-pên</i> )	Tang Collected Statutes, 88: "Chang'an 1, 11th month, 13th day, edict.	Yang 1971: 95, Peng: 385.
China	618-907 CE (Tang)	Ban on compound interest explicitly includes pawnshops	Tang Order Supplemented.	Peng 1993: 385.
India	Mid 2 <sup>nd</sup> century CE	Ban on compound interest	Manu VIII 153.	Chatterjee 1971 :43.
India	5th-6 <sup>th</sup> centuries CE	Ban on compound interest	Brhaspati X 21.	Chatterjee 1971: 46.
Christianity (Eastern Empire)	529 CE	Ban on compound interest (ban on <i>anatacoismus</i> )	Justinian's Code.	Geisst 2013: 3, 18.

<sup>6</sup> See also Table A7 which includes instances where the interest is not to exceed the original principal, in effect preventing compounding.

**Table A7. Limitations on loan or interest size or length**

Case/place	Date	Event	Documentary source	Secondary source
Rome	88 BCE	<i>Lex Cornelia Pompeia unciaria</i> limits amount of debt senators can incur (probably more an attempt to prevent corruption than to prevent indebtedness)	Plutarch <i>Sulla</i> 8.	Rotondi 1912: 99.
Asia Minor (Roman province)	70 BCE	Interest not to exceed principal, lender not to receive more than a quarter of debtor's income	Plutarch <i>Lucullus</i> 20.	Hudson 1993: 52; Wylie 1994.
Rome	47 CE	Law forbidding loans at interest to be repaid upon a father's death	Tacitus <i>Annales</i> 11.13.	Rotondi 1912: 99.
India	Mid 3rd century BCE	Interest (possibly only money loans) not to exceed principal	Gautama G.D.S. XII 28.	Chatterjee 1971: 49.
India	Mid 3rd century BCE (perhaps later insertion; Chatterjee: 57).	Interest not to exceed five times principal on animals, on wool, on the produce of a field and on beasts of burden	Gautama G.D.S. XII 33.	Chatterjee 1971: 54.
India	Mid 3rd century BCE	No interest beyond one year	Gautama G.D.S. XII 27.	Chatterjee 1971: 61.
India	Mid 2 <sup>nd</sup> century BCE-1 century CE	Interest on gold not to exceed principal	Vasistha II 44.	Chatterjee 1971: 49.
India	Mid 2 <sup>nd</sup> century BCE-1 century CE	Interest not to exceed three times principal on grains, fluids, flowers, roots and fruits	Vasistha II 44-46	Chatterjee 1971: 55.
India	Mid 2 <sup>nd</sup> century BCE-1 century CE	Interest not to exceed eight times principal on weighable goods	Vasistha II 47.	Chatterjee 1971: 55.
India	Mid 2 <sup>nd</sup> century CE	Interest not to exceed five times principal on animals, on wool, on the produce of a field and on beasts of burden	Manu VIII 151.	Chatterjee 1971.
India	Mid 2 <sup>nd</sup> century CE	No interest beyond one year	Manu VIII 153.	Chatterjee 1971: 53, 61 (also noting evasion by novation possible).
India	4 <sup>th</sup> to 5 <sup>th</sup> century CE	Interest on gold not to exceed principal	Yājñavalkya.	Chatterjee 1971: 50, 53 (also noting evasion by novation possible).
India	4 <sup>th</sup> -5 <sup>th</sup> century CE	Interest not to exceed eight times principal for fluids, four times on cloth, three times on grain	Yājñavalkya II.39	Chatterjee 1971: 55-56.
India	5 <sup>th</sup> - 6 <sup>th</sup> century CE	Interest not to exceed principal	Brhaspati X 17, also 21, 24	Chatterjee 1971: 49.
India	7th-8th century CE	Interest not to exceed principal	Kātyāyana 509-510.	Chatterjee 1971.
India	Late 9 <sup>th</sup> century CE	No interest beyond one year	Commentary on Manu VIII 153.	Chatterjee 1971: 62.
India	Before 10 <sup>th</sup> century CE	Interest on money not to exceed principal	Bhāruci commentary on Manu VIII 151	Chatterjee 1971: 49.
India	Before 10 <sup>th</sup> century CE	No interest beyond one year if it more than doubles the debt	Bhāruci commentary on Manu VIII 153, also refers to Gautama XII 31 (28)-II.3.28	Chatterjee 1971: 61.

<b>India</b>	20 <sup>th</sup> century CE	Interest not to exceed principal	<i>Dāmpudat</i>	Chatterjee: xiii, 49; Kane III:423-425.
<b>China</b>	618-907 CE (Tang)	Interest not to exceed principal	Tang Order Supplemented	Peng 1993: 384.
<b>China</b>	618-907 CE (Tang)	Grain loans limited to one year	Tang Order Supplemented	Peng 1993: 384.
<b>China</b>	511 CE (and reiterated from 7 <sup>th</sup> to 20 <sup>th</sup> century)	Interest not to exceed principal ( <i>i-pên i-lî</i> )	Wei shu, 114.18a-b.	Yang 1971: 95.
<b>China</b>	1115-1234 CE (Jin)	Interest not to exceed principal	Ruzhen-Jin History, or 'Jin Shi', 50 'Treatise on Food and Money', 5, 'Harmonious Purchase'.	Peng 1993: 625.
<b>China</b>	1240 CE	Interest not to exceed principal on loans longer than one year	Yuan History: 2 'Annals of the Emperor Taizong' 12th year. Yuan History 146 'Biography of Yelü Chucai; 191 'Good clerks 1, Biography of Tan Deng; 155 Biography of Shi Tiance; Yuan History, 105 'Treatise on Punishments' 4, Prohibitions; Yuan History 125.	Peng 1993: 625.
<b>China</b>	1266 CE	Interest not to exceed principal (even upon novation)	Itemization of the Universal System, 28 'Taking Interest in Violation of Rules'.	Peng 1993: 625.
<b>China</b>	c.1368-1379 CE	Interest not to exceed principal	Dong Hanyang, <i>Green Jade Village Miscellaneous Holdings</i> , 'Shen Wansan, Xiu.'	Peng 1993: 741.
<b>China</b>	1368-1644 CE (Ming)	Interest not to exceed principal (on private loans and pawned goods)		Peng 1993: 741.
<b>Christianity (Eastern Empire)<sup>7</sup></b>	c.440-461 CE	Interest not to exceed principal	Constitutions of Leo.	Geisst 2013: 24.
<b>Christianity (Eastern Empire)</b>	529 CE	Interest not to exceed principal ( <i>alterum tantum</i> restriction)	Justinian's Code, 'Institutes' title IV.	Geisst 2013: 3, 18, 68.
<b>The Tolai</b>	19 <sup>th</sup> century CE	Interest not to exceed principal (interest limited to 100%, loans generally to 10 months)	Parkinson 1907: 94.	Connell 1977: 85 (citing Fisk 1972: 368).

<sup>7</sup> Geisst (2013: 18), citing Vespey-Fitzgerald (1925), writes that there is a "general assumption" that the ban on interest exceeding principal along with other interest legislation lapsed between Ulpian in the 3<sup>rd</sup> century CE and Justinian's 6<sup>th</sup> century revival. However, Vespey-Fitzgerald (1925:175) in fact makes a distinction between the *anatocismus* prohibition against compounding and the *alterum tantum* prohibition against interest exceeding the principal, and it is only the former that Vespey-Fitzgerald suggests was "semi-obsolete" by the time of Ulpian. Indeed, Geisst cites Leo's Constitution as well as a court case, evidence that the *alterum tantum* prohibition against interest exceeding principal was still being applied during the 5<sup>th</sup> century CE.

**Table A8. Interest rate caps**

Case/place	Date	Event	Documentary source	Secondary source
Mesopotamia	2130-2088 BCE	33% annually	Code of Hammurabi	Homer and Scylla 1996.
The Hebrews, Levant	444-432 BCE	12% used to settle disputes	Nehemiah	Geisst 2013:15 (citing Neufeld 1954: 196).
Rome	450 BCE	8 1/3 % annually	The Twelve Tables, Table 8, 18A.	Geisst 2013: 16; Savunen 1993: 145
Rome	357 BCE	Reiteration of interest cap ( <i>lex Duilia menenia de inciario fenore</i> )	Livy 7.16.1; Cato <i>De Agricultura</i> 1.1.	Savunen 1993: 148; Cornell 1989: 333; Hudson 1993: 50; Elster 2003: 19-21.
Rome	347 BCE	4 1/6 % cap ( <i>plebisc. de fenore semunciario</i> )	Livy 7.27.3; Tacitus <i>Annales</i> 6.16.	Cornell 1989: 333, Hudson 1993: 50; Savunen 1993:149; Elster 2003:30-31.
Rome	193 BCE	Interest cap extended to non-Romans	Livy 35.7.	Hudson 1993: 51.
Asia Minor (Roman province)	70 BCE	12% cap imposed by Lucullus		Hudson 1993: 52.
Rome	46 BCE	<i>Lex Iulia de modo credenda possidendique intra Italiam</i> , limiting the interest rate (presumably to 8 1/3%; also prescribed that two thirds of creditor capital must be invested in land in Italy)	Tacitus <i>Annales</i> 6.16-17.	Rotondi 1912: 99.
Rome	33 CE	8 1/3% cap reimposed by Tiberius (essentially a re-enactment of the law of 46 BCE)	Tacitus <i>Annales</i> 6.16-17.	Hudson 1993: 52.
India	Mid 3 <sup>rd</sup> century BCE	15% annually	Gautama, G.D.S XII.26.	Chatterjee 1971: 21.
India	Mid 2 <sup>nd</sup> century BCE	12% or 15%	Baudhāyana 1.5.10.23.	Chatterjee 1971: 23.
India	Mid 2 <sup>nd</sup> BCE-1 <sup>st</sup> century CE	15% annually	Vasistha II.50.	Chatterjee 1971: 23, Kosambi 1996: 254.
India	Mid 2 <sup>nd</sup> BCE-1 <sup>st</sup> century CE	2,3,4,5% monthly depending on caste of debtor	Vasistha II.48.	Chatterjee 1971: 26.
India	Perhaps mid 1 <sup>st</sup> century CE	15% or 60% for business lending	Kautilya's <i>Arthashastra</i> 3,II.1.	Chatterjee 1971: 22; Kosambi 1996: 147-148.
India	Mid 2 <sup>nd</sup> century CE	15% annually, 2% monthly acceptable	Manu VIII, 140-141.	Chatterjee 1971: 23
India	Mid 2 <sup>nd</sup> century CE	2, 3, 4, 5% monthly by caste	Manu VIII, 142	Chatterjee 1971: 26.
India	Mid 2 <sup>nd</sup> century CE	5% monthly	Manu VIII, 152	Chatterjee 1971: 28.

<b>India<sup>8</sup></b>	Mid 2 <sup>nd</sup> century CE	Any rate agreed by experts	Manu VIII, 153, 157.	Chatterjee 1971: 36.
<b>India</b>	4th-5 <sup>th</sup> century AD	15% annually	Yājñavalkya II.37	Chatterjee 1971: 23.
<b>India</b>	4th-5 <sup>th</sup> century CE	2,3,4,5% monthly by caste	Yājñavalkya II.37	Chatterjee 1971: 26.
<b>India</b>	4th-5 <sup>th</sup> century CE	10% for trade loans if crossing forests, 20% if crossing oceans.	Yājñavalkya II.38	Chatterjee 1971: 29.
<b>India</b>	4th-5 <sup>th</sup> century CE	Any agreed rate	Yājñavalkya II.38	Chatterjee 1971: 30.
<b>India</b>	5 <sup>th</sup> -6 <sup>th</sup> century CE	15% annually, 2% monthly	Nārada IV.99, 101.	Chatterjee 1971: 23.
<b>India</b>	5 <sup>th</sup> -6 <sup>th</sup> century CE	2,3,4,5% monthly by caste	Nārada IV, 100	Chatterjee 1971: 26.
<b>India</b>	5 <sup>th</sup> -6 <sup>th</sup> century CE	According to circumstance	Nārada IV, 103, 105	Chatterjee 1971: 35, 31.
<b>India</b>	5 <sup>th</sup> -6 <sup>th</sup> century CE	15% annually	Brhaspati X.28	Chatterjee 1971: 23.
<b>India</b>	5 <sup>th</sup> -6 <sup>th</sup> century CE	2,3,4,5% by caste	Brhaspati X.4	Chatterjee 1971: 26.
<b>India</b>	Uncertain	1/80 monthly for pledged loans, 1/60 monthly for sureties loans.	Vyāsa (quoted in the Smṛticandrika 11.361).	Chatterjee 1971: 24.
<b>India</b>	Uncertain	2% monthly without pledge	Vyāsa (quoted in the Vivādaratnākara, 7).	Chatterjee 1971: 26.
<b>India</b>	Uncertain	24% annually or 2% monthly	Hārīta (quoted in Vācaspatimīśra 3, Vivādaratnākara 8).	Chatterjee 1971: 24.
<b>India</b>	Late 9 <sup>th</sup> century CE	1/80 monthly, or 2% monthly if the creditor cannot maintain livelihood on 1/80	Medhātīthi commentary on Manu VIII 142.	Chatterjee 1971: 26.
<b>India</b>	Late 9 <sup>th</sup> century CE	5% monthly acceptable if the lender thinks borrower will use it for business	Medhātīthi commentary on Manu VIII 152.	Chatterjee 1971: 28.
<b>India</b>	Late 9 <sup>th</sup> century CE	Any agreed rate between distant traders	Medhātīthi commentary on Manu VIII 153.	Chatterjee 1971: 35.
<b>India</b>	Before 10 <sup>th</sup> century CE	Any agreed rate, even above 10% and in times of debtor distress	Asahāya commentary on Nārada IV 103.	Chatterjee 1971: 35.
<b>India (under British Rule)</b>	Under George III (r.1760-1820 CE)	12% annually		Geisst 2013: 115.
<b>China</b>	3rd century BCE	20% annually	Zhou li (Rituals of Zhou), 14 'Local Official Coin Offices',	Peng 1993: 535.

<sup>8</sup> Beginning with Manu, Indian texts seem to re-iterate the rate caps given by previous authorities depending on caste and circumstance, but ultimately tend to apply no cap to freely negotiated contracts between knowledgeable people.



			plus notes by Xuan of Han and Jia Gongyan.	
China	116 BCE	A rate cap	Han Shu 15, Table of Princely Ranks.	Yang 1971: 94; Peng 1993: 209.
China	31 BCE	A rate cap	Han Shu 15, Table of Princely Ranks.	Yang 1971: 94, Peng 1993: 209.
China	618-907 CE (Tang)	A rate cap (though often unenforced)		Yang 1971: 98.
China (Middle Capital and the Southern Capital (i.e. Bianjing), and in Dongping and Zhending)	1173 CE	1% monthly on pawnshop loans	Ruzhen-Jin History, 57, Treatise on Officials, 3.	Peng 1993: 625.
China	1282 CE	3% and 4.3% monthly	Yuan History 12 Annals of Emperor Shizu, 9; Itemization of the Universal System, 28; Xu Zaisi, Qing River Prefaces ("Xiangsi").	Peng 1993: 626.
China	c.1368-1379 CE	3% monthly	Dong Hanyang, <i>Green Jade Village Miscellaneous Holdings</i> , 'Shen Wansan, Xiu'.	Peng 1993: 741.
China	1368-1644 CE (Ming)	3% monthly		Peng 1993: 742.
China (Chekian province, Hou-chou)	End 17 <sup>th</sup> century CE	1.5-3% monthly pawnshop sliding scale		Yang 1971: 98-99.
China (Chekian province)	1780 CE	0.8-2% pawnshop sliding scale	'Hu-chou fu-chih', [Gazetteer of the Hou-chou prefecture] 1874 ed., 77.37b. 95.24a-b.	Yang 1971: 98-99.
China	1644-1911 CE (Qing)	3% monthly		Von Glahn 2016: ch8.
Christianity (Visigoth France)	642-643 CE, 654 CE	12.5% annually (except if contracted and already paid)	<i>Forum Judicum</i> (Visigothic Code), book 5, in Scott, 1910, ch.8.	Geisst 2013: 30 (citing Scott 1910: ch.8).
Christianity (Holy Roman Empire)	1540 CE	12% annually	Constitution of Charles V: 767.	Gordon 1975: 257 (citing Lessius 1605: 11:20:14:124).
Christianity (England)	1545 CE	10% annually		Geisst 2013: 76.
Christianity (England)	1571 CE	10% cap restored (after complete interest ban in 1552)	Act of 1571.	Geisst 2013: 76.
Christianity (United Kingdom)	1624 CE	8% annually, by James I's parliament		Geisst 2013: 92, 102.
Christianity (United Kingdom)	1713-1854 CE	5% annually (from Queen Anne to Queen Victoria)		Geisst 2013: 102.
Christianity (United Kingdom)	1900 CE	5% annually (though any rate permitted if expressly agreed in	Money-Lenders Act 1900	Geisst 2013: 177-178 (citing Bridges and Spear 1908).

		the absence of distress)		
<b>Islam (Ottoman Empire)</b>	16 <sup>th</sup> and 17 <sup>th</sup> century CE	10-20% annually	Judicial records in Kayseri, Anatolia, Turkey	Kuran 2012: 148; Rubin 2011: 1316n15.
<b>Islam (Ottoman Empire)</b>	17 <sup>th</sup> century CE	15% annually		Rubin 2011: 1315 (citing Imber 1997: 14).