

# Financial and world economic crisis: What did economists contribute?

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**Abstract** In this paper we deal with two questions, (1) what are the origins of the current financial crisis, and (2) what did economists contribute, or why did economists fail to provide a convincing answer for the origins of the crisis, and possible solutions to overcome it? The economics profession apparently was unaware of the looming worldwide financial and economic crisis, and significantly underestimated its global dimensions and consequences. A first and preliminary analysis is undertaken to explore reasons for these failures. We conclude by pointing to some consequences for economics as well as for economic policy.

**Keywords** Financial crisis · Crisis management · Failure of economics · Failure of economic researchers · Origin of the crisis

**JEL Classification** A11 · B40 · D72 · D73 · D8 · G01 · K2

## 1 Introduction

Currently, we are observing one of the most severe and deep world financial and economic crises in history. The most important economies (like those of the United States, China, India, Japan, Germany, and Britain) are in deep recession and we also observe a severe financial crisis, e.g., mistrust between the financial institutions. This caused a reaction in which almost all governments engaged in substantial deficit spending to inject liquidity into financial markets and to fight the economic downswing. All this happened within half a year to nine months, and economic researchers are now confronted with explaining how this

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could have happened. The public and politicians ask the economics profession, what were the causes of this deep crisis and what can be done to overcome it.

In this contribution, we try to provide some preliminary answers. In Sect. 2, some remarks are given on the origins of the financial crisis. Section 3 then deals with the role played by economists during the events of the recent past. Section 4 points to the failure of our economic models, and finally, in Sect. 5, some conclusions for economics as well as economic policy are drawn.

## 2 Some remarks on the origins of the financial crisis

The financial crisis which had its origins in the United States and the induced worldwide economic crisis pose two important questions:

- (1) What caused the crisis?
- (2) What should be done to minimize the risk of repetition if not of identical events than of at least something similar?

A more parsimonious way of turning around these two questions is the following: If in retrospect the causes of this crisis are so obvious, why did so many smart researchers (and especially economists) fail to appreciate the gravity of the situation beforehand? One could imagine that with sufficient preparation, these problems (financial and economic) would have been addressed well before the seriousness of the current crises had become apparent. It is reported<sup>1</sup> that former US Treasury Secretary Henry Paulson tabled a plan for re-organizing and consolidating the supervision and the regulation of the US financial system. One might similarly imagine that, sooner or later, federal agencies would have extended insurance to money market, mutual funds, and investment banks, but they remain unregulated so far. Early action would have brought on the regulatory umbrella. But such major changes in regulatory policy take time—even now (June 2009) it is not clear what type of regulatory framework ultimately will be implemented.

At the most basic level, the subprime crisis resulted from the tendency of financial normalization and innovation to run ahead of financial regulation, as Eichengreen (2008a, 2008b: 3) argues. For a long time, deregulation was the order of the day not only outside but also within financial markets, as illustrated by, for example, eliminating the Glass-Steagall Act's restrictions on mixing investment and commercial banking.<sup>2</sup> However, considering what had happened, the problem was that other (regulatory) policies were not adapted to the new environment. Conglomerization takes time. In the short-run, investment banks were allowed to lever-up their bets, they “stood” completely beyond the purview of the regulators. As independent entities funded themselves on a short-term basis, they were vulnerable to liquidity “crunches” and disruptions to their funding. A crisis sufficient to threaten the financial system ultimately precipitated the inevitable consolidation.<sup>3</sup>

A second major element of the crisis was a consumer spending boom from 2002 to 2007 and the resulting domestic and international imbalances. The Bush administration cut taxes,

<sup>1</sup>But see, for example, Paulson et al. (2008).

<sup>2</sup>See, for example, Eichengreen (2008a) or Krozner and Rajan (1994, 1997).

<sup>3</sup>See Eichengreen (2008a).

causing a massive deficit for the government.<sup>4</sup> The Federal Reserve cut interest rates in response to the 2001 recession. In addition to this action, the new financial innovations made credit even cheaper and more widely available.<sup>5</sup> This, of course, is just one, but nevertheless a major element in the “crisis” story, contributing in its own way to the collapse of the market for subprime mortgages. Such loans were packaged, “securitized” and pushed by the subsidiaries of Lehman Brothers and other major financial institutions. The result was increased US consumer spending and the decline of measured household savings into negative territory.

The third element was financial internationalization. Much as with the separation of investment from commercial banking, the Great Depression led to the imposition of tight and persistent restrictions on international capital flows. From the 1970s on, these restrictions have gradually been relaxed, which was another indication that policy makers had forgotten the Great Depression. Deregulation continued and accelerated during the 1990s.<sup>6</sup> Facilitating US dependence on foreign finance and feeding in this way the country’s credit boom helped to set the stage for what followed from 2007 on. What additionally helped to set the stage for the crisis were the rise of China and the decline of investment in Asia following the 1997–1998 currency crisis. With China saving on average nearly 50% of its GNP, this “money” more or less had to go abroad.<sup>7</sup> A great part of it went into US Treasury securities and the obligations of the Federal Home Loan Banks (FHLB), Fannie Mae and Freddy Mac. These capital inflows “propped” up the dollar.<sup>8</sup> It reduced the cost of borrowing for Americans on some estimates by as much as 100 basis points, encouraging them to live far beyond their financial means.<sup>9</sup> This behaviour created an opportunistic market for Freddy, Fannie and for other financial institutions, creating substitutes for those agency’s own securities.

To sum up: In the United States the financial crisis was facilitated by policies of domestic and international liberalization accompanied by however well-intended financial innovations, such as complex derivative securities, “conduits” and “structured investment vehicles”, which were not regulated at all. Other innovations in risk management worked in the same direction. According to Eichengreen (2008a, 2008b), commercial banks, investment banks and hedge funds were encouraged by the dynamic development of the financial market to use more leverage and their counterparties were inspired to provide it by the development of mathematical models and methods to quantify and hedge risks. These new models, which were rigorous and promised to provide “exact” information emboldened market participants to believe that the additional leverage was safe since participants now used scientific techniques and were convinced that they could manage it.

A major problem was, however, that these “new” models were estimated using data from recent periods of low volatility over, typically, relatively short intervals, given that the financial instruments, whose returns being modelled, had existed only for a few years. Events, which should have been modelled or simulated, like a sharp drop in housing prices, were

<sup>4</sup>However, comparing the enormous deficit spending, the Obama administration is now undertaking, the one of the Bush administration (1) is modest. However, one has to admit that a great part of the deficit spending the Obama administration is now undertaken has its source in the World Financial and Economic Crisis.

<sup>5</sup>See, for example, Mason and Rosner (2007) for an overview of these new financial innovations like mortgage-backed securities and other collateralized debt obligations.

<sup>6</sup>Compare here Congleton (2009), Himmelberg et al. (2004), as well as Eichengreen (2008b).

<sup>7</sup>Compare Eichengreen (2008a) as well as Warnock and Warnock (2006).

<sup>8</sup>For an explanation of these global developments (and the imbalances they caused), compare Caballero et al. (2008).

<sup>9</sup>Compare Warnock and Warnock (2006), and Congleton (2009).

151 outside the sample period and, hence, were not captured by these models.<sup>10</sup> Institutional in-  
 152 vestors convinced themselves on the basis of these models that their financial practices were  
 153 relatively safe. They persuaded the public regulatory agencies to allow financial institutions  
 154 to use these models when deciding how much capital to hold to provision against risk.<sup>11</sup>

155 This short analysis is by no means a complete or comprehensive explanation for the finan-  
 156 cial crisis. Other authors, such as Eichengreen (2008a, 2008b), Acemoglu (2009), Adams  
 157 (2009), or Congleton (2009), emphasize other factors (not testing the economic models out-  
 158 of-sample, relying on trust or mistrust, and placing too much confidence in the market's  
 159 adjustment capacity, for example).

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### 162 3 The financial crisis and the role of economists

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164 The global financial (and economic) crisis has created an urgent need to fundamentally  
 165 rethink how financial systems are functioning and how they are regulated. The worldwide  
 166 financial collapse leads, in our opinion, also to a quite clear systematic criticism of the  
 167 economics profession. Over the past three decades economists have developed and relied  
 168 on models that by and large disregard key-factors (e.g., heterogeneity of decision rules,  
 169 revisions of forecasting results and strategies, and changes in the social world) that influence  
 170 the outcomes of financial products as well as those supplied by other markets. Moreover, the  
 171 work of mainstream economists has crowded out research on major causes of the current  
 172 financial crisis. There has also been little scientific exploration of early indicators of this  
 173 systemic crisis and of potential ways of preventing the crisis from developing to a worldwide  
 174 one. In fact, if one looks through the academic literature of macroeconomics and finance,  
 175 the possibility of a systemic crisis (i.e., one leading to a collapse of the global economy)  
 176 appears like a futuristic and unrealistic event that is absent from our economic models. Most  
 177 economic models offer no explanation for such a crisis and, hence, provide no strategy for  
 178 defeating it.<sup>12</sup>

179 The implicit view behind our standard models is that markets and economies are inher-  
 180 ently stable and that they only temporarily deviate from this stability and equilibrium. Thus,  
 181 we overestimated the capacity of markets to correct disequilibria or at least underestimated  
 182 the social costs that are caused by such corrections. Hardly anybody, neither politicians nor  
 183 scientists, expected, for example, the consequences of Lehman Brothers' bankruptcy—or  
 184 the back-out of Bear Stearns. Otherwise, that institution probably would have been saved.  
 185 Hence, the majority of economic researchers failed to warn policy makers about the possi-  
 186 bilities of a systemic financial crisis and ignored the work of those, such as, Krugman and  
 187 Stiglitz, who did.<sup>13</sup>

188 Ironically, as the systemic financial crisis developed, economists had no choice but to  
 189 abandon their models and their trust in markets, and they could "only" produce common-  
 190 sense economic advice recommending massive government intervention. Common-sense  
 191 advice, which may sometimes be quite useful, is a poor substitute for a theoretically derived  
 192 and empirically tested model that can provide urgently needed policy advice, for example,  
 193 in the area of financial regulation. It is simply not enough to argue that existing models do  
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<sup>10</sup>Compare Mason and Rosner (2007).

197 <sup>11</sup>See here also the contribution by Congleton (2009).

198 <sup>12</sup>Compare Reinhart and Rogoff (2008) as well as Colander et al. (2009).

199 <sup>13</sup>Compare Krugman (2000, 2004) and Stiglitz (2008, 2009).

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201 not foresee such a crisis; what we need are models accommodating the possibility of such  
 202 systemic financial crises. That we do not yet have such models is astonishing because we ex-  
 203 perience a number of somewhat smaller but, nevertheless, important financial crises before  
 204 (in Asia, Mexico, Russia, the United States, and so on), that already had had tremendous  
 205 impacts on the economies in the countries involved.<sup>14</sup>

206 One explanation for this failure goes back to the profession’s methodological roots. The  
 207 often-expressed worldview of economic researchers, namely that they are mostly concerned  
 208 with the allocation of scarce resources, can be short-sighted and misleading. It reduces the  
 209 work of economists to the study of optimal decisions in well-specified problems of individ-  
 210 ual choice. The danger in such research is that it loses track of the (sometimes unstable)  
 211 dynamics of economic systems. Without an adequate understanding of these dynamic eco-  
 212 nomic (especially financial) processes, one is likely to miss important factors that influence  
 213 the economic system (especially decision-making). The use of the standard and traditional  
 214 economic models often leads researchers to neglect questions about the stability of the sys-  
 215 tem, a missing coordination of key actors resulting in the possibility of system failures.

216 One might even put forward the hypothesis that economic researchers have been captured  
 217 into a sup-optimal equilibrium in which much of their research efforts are not directed to-  
 218 wards the most prevalent needs of society. Quite often, the most relevant economic problems  
 219 in our societies are not addressed; hence, our profession bears part of the responsibility for  
 220 the current crisis. We have failed to provide as much insight or knowledge into the workings  
 221 of the economy as possible (here, especially, the financial markets) for the good of a society.

222 Many of financial economists, who developed the theoretical models, which were then  
 223 used in actual practice, were well aware of their models’ strong and highly unrealistic as-  
 224 sumptions or restrictions, which had to be made to ensure stability. According to Colander  
 225 et al. (2009: 3), financial economists gave little warning to the public about the fragility or  
 226 instability of their models. There are a number of possible explanations why they did not  
 227 warn the public. One is a lack of understanding, which is not a good explanation, because  
 228 then these financial researchers did not know that their models were unstable or fragile. If  
 229 it is true, what is quite often said, that financial economists are extremely bright, then they  
 230 should have understood the limitations of their models. A second explanation is that they  
 231 did not think that it is their task to warn the public about the fragility of these models. In our  
 232 opinion, however, “economists, as all other social scientists, have an ethical responsibility  
 233 to communicate the limitations of the models and the potential misuse of their research”  
 234 (Colander et al. 2009: 4).

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237 **4 The failure of economic models**

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239 Most economic (especially textbook) models, which are applied to the study of the alloca-  
 240 tion of scarce resources, are predominantly of a representative-agent type. Financial mar-  
 241 ket models operate by letting this representative agent manage his financial affairs as one  
 242 constraint on his utility-maximization objective over his (infinite) expected lifespan and as-  
 243 signing “correct” probabilities to all possible future events. In the finance world (at least  
 244 on its practical side), mathematical portfolio and risk management models have served as  
 245 academic justifications for the tremendous increase in trading volumes and the proliferation  
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247 <sup>14</sup>What is additionally surprising is the long academic legacy of economic studies of crisis phenomena, which  
 248 can be found in the work of Leijonhufvud (2000), Kindleberger (1989) and Minsky (1986), just to name a  
 249 few prominent examples.

251 of “exotic” financial instruments. What was and still is a big problem in using these models  
 252 is that, unfortunately, historical data were hardly available in most cases, meaning that the  
 253 researcher had to rely on simulations, quite often with relatively arbitrary assumptions on  
 254 correlations between risk and default probabilities. This makes the empirical validation of  
 255 these theories questionable.

256 There is, however, also a deeper problem involved. It is well known since the famous  
 257 contribution of Mandelbrot (1963) that financial time series have fat tails, i.e. that, given  
 258 the mean and (if it exists at all) the variance of the series, the probability of extreme events  
 259 is higher than if the data-generating process were normal. This should make those working  
 260 with such models attentive to the possibility of unusual events. It is, however, difficult to take  
 261 them into account if they did not occur for decades, even if one bears in mind that, however  
 262 small the probability is, such an event might nevertheless occur. However, it is practically  
 263 impossible to live with and always to take into account the worst scenario possible. This  
 264 holds for general people, but for financial analysts as well, and it should have induced them  
 265 to take these risks into account.

266 A further somewhat different aspect of failure of the economic models in finance is the  
 267 danger of the illusion of control mechanisms. The mathematical rigor, elegance and the numerical  
 268 precision of the various risk-management and asset-pricing tools have a tendency to  
 269 “hide” the weaknesses of these models and their underlying assumptions, which are necessary  
 270 to guarantee the models’ values to those who have not developed them. Naturally, theoretical  
 271 models always are only approximations of real-world situations. In the last decade,  
 272 some progress has been made in developing more refined models. However, as such models  
 273 better capture the volatility of markets and generate “better” predictions; this might again  
 274 contribute to strengthening the control illusion of the naive user.

275 Many economic models are built upon the dual assumption of rational expectations and of  
 276 a representative agent. Rational-expectations models assume that the individuals base their  
 277 forecasts on the knowledge of the (true) structure of the economic system. A behavioural  
 278 interpretation of this assumption is that the individuals (including the economists) have a  
 279 complete understanding of the economic mechanisms by which the world operates. This  
 280 has the consequence that the new and perhaps better insights about how individuals actually  
 281 form their expectations from applied research in psychology and behavioural economics  
 282 cannot be incorporated within rational expectation models, as everything is predetermined  
 283 and no leeway is left for imperfect knowledge and adaptive adjustments. Thus, as Colander  
 284 et al. (2009: 7) argue, despite its many refinements, rational expectation models are not at  
 285 all an approach to decision-making that has been confirmed empirically. Indeed, Colander  
 286 et al. (2009), along with Lo et al. (2005) and Coates and Herbert (2008), have shown that  
 287 financial markets are influenced by emotional factors. Moreover, the rational expectations  
 288 model has made economics blind to the role of interactions (e.g., trust!) between actors.  
 289 Indeed, some work on contagion and herding behaviour,<sup>15</sup> which is closely connected to  
 290 the network structure of the economy, has not been incorporated into orthodox economic  
 291 models.

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 294 **5 Conclusions for economics as well as for economic policy**

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 296 Recent decades were times of deregulation and privatization, based on economists’ ideas.  
 297 No other social science had such a tremendous impact on the development of our societies.

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 299 <sup>15</sup>See, for example, Banerjee (1992) or Chamley (2008).  
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301 However, the results are mixed; financial markets are by far the most important, but supply  
 302 just one example that deregulation and/or privatization did not produce the promised benefits  
 303 for the citizens. Thus, we need new regulations. This does not necessarily imply more but  
 304 definitely better regulation. Two important points might be mentioned in this respect:

- 305 • One of the most undesirable consequences of the financial crisis is that those who have  
 306 been responsible for the failure of big banks like UBS in Switzerland do not bear full  
 307 responsibility. Without state intervention, this bank would be bankrupt. Thus, the share-  
 308 holders would lose all their money, and the managers would lose their jobs, without any  
 309 golden handshake, of course. State intervention is, however, necessary because such banks  
 310 are “too big to fail” and their bankruptcy would cause tremendous economic and social  
 311 problems for the respective societies. This insulates those who are responsible, at least  
 312 partially, from these losses. And it creates the wrong incentives; it seduces private deci-  
 313 sion makers to accept too large risks. (At least) two solutions for this problem are being  
 314 discussed today. One possibility is to break up these banks into smaller units so that their  
 315 bankruptcies do not cause major problems for their countries, as is the case today with  
 316 respect to small private as well as public banks. An alternative is to find rules for the bank-  
 317 ruptcy of such banks that preserve the interests of their customers and, therefore, maintain  
 318 trust in the financial system, but let the shareholders lose all their money and the higher  
 319 level managers their jobs. Today, it is an open question as to what the better alternative is,  
 320 but it is an important task for financial economists to develop rules that might answer that  
 321 important question.
- 322 • In the current crisis, as well as in the new economy crises of eight years ago, many pen-  
 323 sioners lost part—and some even all of their capital-based retirement accounts. Capital-  
 324 based pensions have been promoted by economists as not only having higher return but  
 325 also being safer than pay-as-you-go pensions because of the political risks connected  
 326 with the latter. Today we see that—not surprisingly—the higher return on a capital-based  
 327 system also brings with it a higher risk. To regain the trust of the general public in the  
 328 capital-based system we have to re-think the risks of those systems and their reallocation  
 329 of those risks across generations.

331 More generally, we have to re-think the proper role of the government in our society. Tra-  
 332 ditional public finance concentrated on market failures and neglected government failures.  
 333 Public choice theory, on the other hand, emphasizes government failure and (at least very of-  
 334 ten) neglects market failure. In the recent decades of deregulation and privatization the latter  
 335 approach was politically much more influential than the former. In Europe this was due to a  
 336 large extent to the institutions of the European Union, especially its Supreme Court. Some  
 337 economists even dreamed of an even much more reduced role for government in the future.<sup>16</sup>  
 338 A rational approach will take both market- as well as government failure into account and  
 339 it will probably assign to the government a still limited, but nevertheless more far reaching  
 340 role than many public choice scholars believe to be appropriate. Whatever economists think,  
 341 however, in a democracy, political decisions about the role of the government will be taken  
 342 by the citizens or their representatives, respectively, and the economists whose reputations  
 343 have been damaged considerably will have to work hard to further convince them that the  
 344 role of the government should remain limited.

345 In this respect, we also have to ask what the government can do to fight economic crises.  
 346 In the 1950s and 1960s, the period of the so-called Neoclassical Synthesis, when we all were

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347 <sup>16</sup>See, for example, Shleifer (1998) or, even more extreme, Friedman (1996).  
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351 Keynesians, many economists believed strongly in the ability of government to “fine-tune”  
 352 the business cycle. That conviction was destroyed in the 1970s when rational-expectations  
 353 economics, including real business cycle theory, took off on its triumphal course. The latter  
 354 has been rejected empirically, but the sustained economic growth of the last decade made  
 355 many believe that progress is sustainable without cycles and will, perhaps, be the prospect  
 356 for the future. Already with the new economy crises, but at least with the current financial  
 357 and economic crisis, this illusion burst. Without assuming that we are suddenly all Keyne-  
 358 sians again, in recent months there has hardly been any resistance to Keynesian-type fiscal  
 359 programmes in most countries. But this is not the end because, as mentioned above, we do  
 360 not have a good theory on which sound political responses could be based. Thus, one of our  
 361 tasks is to develop such a theory.

362 Finally, at least for some European countries, it is necessary to find a new balance be-  
 363 tween the financial sector and other sectors of the economy that produce goods. Iceland is  
 364 the most extreme example, but Ireland is another one, and Switzerland also has problems in  
 365 this respect. Dependence on the highly volatile financial sector exposes a small economy to  
 366 very high risk. What Acemoglu (2009: 4) demands for the United States holds even more  
 367 so for these small countries: “skilled labour should be re-allocated away from the financial  
 368 industry towards more innovative sectors.”

369 Taking all this into account, we should, however, not forget some basic economic lessons.  
 370 First, besides the necessity of fighting the current crisis we should take the long-run con-  
 371 sequences of our measures into account. Times of crises, with huge public “investment”  
 372 programmes, are ideal environments for rent-seeking and lobbying.<sup>17</sup> In Germany, for ex-  
 373 ample, huge subsidies are now given to Opel, a subsidiary company of General Motors,  
 374 the problems of which have almost nothing to do with the current financial and economic  
 375 crisis. Moreover, several billions of Euros are used for “scrap” premia, i.e., financial incen-  
 376 tives to trade in cars that are at least nine years old. This measure makes neither economic  
 377 nor ecologic sense, and the straw fire sparked by it will soon die out without contributing  
 378 anything to solve Germany’s problems of automobile production overcapacity. On the other  
 379 hand, such measures impose burdens on future generations, reduce future growth chances,  
 380 and only minimally improve the current economic situation.

382 Second, history tells us that severe economic crises tempt nations to adopt protectionist  
 383 measures. Due to the WTO rules and, for the EU’s member states, due to the strong position  
 384 of its Supreme Court, the danger of bald protectionism is limited. However, there is a danger  
 385 of “soft” protectionism if, for example, governments start to influence their citizens to “Buy  
 386 American” or “Buy French”. The smaller a country is, the more it will be hurt by such  
 387 policies.

388 Thus, even traditional economic theory supplies some advice as to how to enact sound  
 389 economic policy measures in the midst of the current crisis. However, this is not to deny  
 390 that economists have failed to meet in our theories the expectations the general public as  
 391 well as we ourselves had, and we should be ready to confess this. Otherwise it will be  
 392 impossible to restore the profession’s public reputation. On the other hand, as at least the  
 393 new developments in behavioural economics (and behavioural finance) show, the economic  
 394 approach is flexible enough to tackle the problems we are facing. We do not need a new  
 395 economics, but we have to apply (and enlarge the set of) the tools available to our science in  
 396 order to give sound answers that will help to solve our current problems.

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399 <sup>17</sup>Compare also Congleton (2005, 2009).

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 403 original author(s) and source are credited.

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