CENTRUM EXCELENTNOSTI
PRE SPOLOČENSKÉ INOVÁCIE
Univerzity Komenského v Bratislave

CESI UK Policy Paper 1/2011

Policy proposals in the fight against financial crises

Zsolt Gál

www.fphil.uniba.sk/cesiuk

ISBN 978-80-223-3089-3

"We support research activity in Slovakia./ Project is co-financed from EU resources". The "Global and Local Processes in Slovakia: Developing social innovation within the conditions of the internationalisation of the European Union" project is supported within the framework of measure 4.1: "Supporting the Network of Excellent Research and Development Centres as a Pillar of Regional Development in the Bratislava Region". More information about the Operational Programme of Research and Development is available at the following web page: http://www.asfeu.sk/operacny-program-vyskum-a-vyvoj

Operačný program VÝSKUM a VÝVOJ

Európska únia
Európsky fond regionálneho rozvoja

About the policy paper

Policy paper summarizes the main causes and factors that contributed to the last financial crisis, that represent the most important signs which (with great probability) will signalize all upcoming crises. Author also offers policy proposals that should be considered by legislators when trying to prevent another similar crisis in the future.

About the author

Mgr. Zsolt Gál, PhD. works as associate proffessor at Political Science Department, Philosophical faculty of the Comenius University in Bratislava and researcher of the Centre off excellence for social innovations at Comenius Uversity. His main areas of interest are international migration, economic policy and the economic aspects of European integration.

Introduction

In this paper we will try to summarize the main causes and factors that contributed to the last financial crisis, the most important signs which (with great probability) will signalize all upcoming crises, and finally, we offer some policy proposals which might be considered by legislators when trying to prevent another similar crisis from developing.

The most important signs of an upcoming financial crisis are the following:

- Some kind of macroeconomic shock ("displacement", for example a technical or financial innovation), which significantly increases profit opportunities in at least one sector of the economy.
- An above-average rise in asset prices, overvaluation by historic standards and compared to reasonable levels. New investors – without previous experience in the given market segment – rush in to make their fortune because of spectacular profit opportunities. Usually a self-sustaining bubble (positive feedback loop) forms. Price increases are fuelled more and more by the incoming stream of investment and not by the expectations based on underlying fundamental values (based upon the net present value of future cash flows).
- Significantly rising indebtedness (as a percentage of GDP) of households, companies and the government, but especially the financial sector, and falling household savings rates.
- Increasing leverage in the financial sector.
- Monetary expansion: relatively low inflation allows for low interest rates, cheap credit is flowing into the economy; there is an above-average rise in money supply. Quite often central bank interest rates are below the levels that would be consistent with a targeted inflation rate (around 2%, let's say), sometimes even below actual inflation (negative real interest rates).
- Rising external imbalances, growing deficits on the current account, increasing foreign debt.
- Most investors are arguing that "this time is different", many are talking about a "new paradigm" (to explain why this time the asset prices have reached a sustainable high level and are not going to fall).

Of course, all the signs listed above do not have to be present to create a crisis, but most would likely be there (as they were prior to the latest financial crisis). When all of these signs can be observed, the question is not if the crisis will arrive, but when. However, it is near to impossible to precisely predict the timing; in other words, it is very hard to find out when asset prices reach the highest level and start to decline.

In the Table 1 we summarize the main causes and factors that contributed to the latest financial crisis and their consequences. A hypothetical "if not" scenario is added trying to figure out what would (probably) happen in the absence of a particular factor (naturally, it is of a highly speculative nature).

Table 1: The Main Causes and Consequences of the Latest Financial Crisis

The main causes and factors that contributed to the crisis	The consequences	The "if not" scenario – the likely consequences in the absence of the given factor
Non-recourse mortgages secured just with the house as collateral – borrowers had no personal liability for the debt. The possibility of non-recourse default on mortgage debt without risking a deficiency judgment was an American specialty; in all other advanced economies, mortgage loans are recourse.	**Declining prudence** on the borrowers' side. Too many risky loans with high LTV that on long-term are unaffordable. Widespread negative equity after house prices started to fall. Very high – internationally unprecedented – delinquency and foreclosure rates. Resulting huge losses for the mortgage lenders, guarantors, insurers and holders of mortgage related securities and derivatives.	**More cautious and prudent borrowers**, smaller amount of risky loans on the market, lower average LTV and smaller number of mortgages with negative equity. Resulting lower delinquency and foreclosure rates and smaller losses for the mortgage financing industry. But also higher losses for irresponsible households and a higher danger of predatory lending.
True-sale **securitization is the main source of funding for mortgages**. Prior to the crisis, the US became the first country in the world where the majority of housing finance funding came from capital markets (referred to as the *originate to distribute model*) instead of the traditional depository-based funding (referred to as the *originate to hold model*). Prior to the crisis, the majority of the outstanding residential mortgages (but over 80 percent of newly issued mortgages) were securitized in America. In sharp contrast to the European practice (issuing covered bonds), the mortgage loans were removed from the balance sheets of financial institutions, and MBS investors had no claim vis-à-vis the originator (the bank), just against the collateral (the house of the borrower).	**Declining prudence on the side of primary lenders**. By selling mortgage loans lenders could pass credit risk to holders or guarantors/insurers of mortgage backed securities. Securitization created a chain of risk transfer from original mortgage lenders to MBS investors and insurers. Unprecedented degradation in the quality of mortgage loans followed. The majority of financial intermediation migrated outside the traditional banking system to the fragile, opaque and interconnected shadow banking system. Rising delinquency and foreclosure rates lead to a chain reaction, a regional problem in the American housing market – through the channels of financial innovation (securitization) – threatened to tear down the whole global financial system. Huge losses by financial firms and costly government bailouts followed.	**Less risky and more prudent lending policies of primary lenders**. If it is not possible to sell the loans, or if in the case of securitization the lenders issuing mortgage bonds have to keep mortgages on their balance sheets and remain liable for the bonds (like in the case of European covered bonds), primary lenders are not in a position to pass on credit risk. They will control the ability of the borrowers to repay the loans much more than they did. The quality of mortgages probably would not decline so much. The losses from delinquencies and foreclosures would have been lower and they would not spread to the whole financial sector (rather they stop inside mortgage finance). Problems in American housing finance probably would not have triggered a global crisis.
Government housing policy which by various means	**Grand-scale moral hazard** as there was a huge market where	**A smaller supply of risky loans** (from primary lenders) **and**

supported the increase in lending to low and medium income households (including risky subprime and Alt-A loans). FHA insurance, securitization and explicit or implicit guarantees by Ginnie Mae or GSEs (Fannie Mae and Freddie Mac), Affordable Housing Goals set by the HUD for the GSEs and CRA requirements for some mortgage lenders.	lenders could sell or insure their loans (including risky subprime and Alt-A mortgages) to government and semi-government enterprises passing credit risk on to the state. Also, investors could buy mortgage backed securities explicitly or implicitly guaranteed by the government. Government intervention creates strong incentives to issue risky loans and to buy securities created from these loans. The costs for taxpayers (mainly because of the bailout of the two GSEs) are huge.	**smaller demand for securities** (MBS) **created from these loans** (and guaranteed) by Ginnie Mae, Fannie Mae and Freddie Mac. The quality of mortgages probably would not have declined so much. The losses from delinquencies and foreclosures would have been lower, resulting in smaller losses for government and semi-government institutions, and thus lower costs for taxpayers.
Failed regulation of the financial sector. A too high leverage (reverse of the ratio of equity capital to assets) was allowed (especially in the shadow banking system) for Government Sponsored Enterprises (GSEs), banks, broker-dealer and asset management subsidiaries and off-balance sheet entities (conduits, SPVs and SIVs) of large financial holding companies and investment banks. Some market segments, for example over-the-counter (OTC) derivatives like credit default swaps (CDS), were not regulated at all and there were no capital or reserve requirements for these products.	Less regulated, more fragile, opaque and very much interconnected **shadow banking** operating with increasing and very high leverage significantly **surpassed** the (safer, more stable and better regulated) **traditional banking system. Many of its actors became "too big to fail".** Taking ever increasing risks resulted in colossal losses, eating up quickly the relatively small equity capital. Many times (because of the interconnected actors and systemic risk they posed) government bailouts followed with high costs for the taxpayers.	**Higher equity capital to absorb the losses**, a lower amount of taxpayer money needed for bailouts. If there was more shareholders' equity at risk, probably financial institutions would have also followed less risky investment strategies. There would be less shadow banking when it is regulated like normal banking. The same applies for the over-the-counter (OTC) derivatives market if it is regulated (and consequently capital adequacy ratios are required by regulators).
Lax monetary policy of the Fed which kept interest rates too low for too long (ignoring inflation targeting and for some time even actual inflation).	**Strong increase in money supply**, cheap credit flowing to the economy and a resulting **credit expansion and property market bubble**.	**The credit and housing bubble probably would have been smaller**.
Rising external imbalances of the American economy: increasing current account deficits, huge capital import from the rest of the world.	The additional funds flowing to the economy **increased and prolonged the debt-driven boom cycle**, enabling America to live far beyond its means for longer. The influx of foreign capital kept interest rates low,	**The credit and housing bubble probably would have been smaller**. High fiscal deficits and monetary tightening by the Fed (from 2004) would have resulted in higher interest rates (also for mortgages). This might

	enabling cheaper borrowing.	have pricked the housing bubble earlier.
Rising inflow of cheaper foreign goods and immigrant labor.	**Consumer price inflation remained relatively low** both in the case of tradable (cheaper foreign goods) and non-tradable (cheaper immigrant labor) goods.	**Consumer price inflation** – as well as wage increases – **would have been higher**, forcing the Fed to tighten monetary policy earlier and more aggressively. This might have pricked the housing bubble earlier.

Policy proposals

In the future – to minimize the possibility of similar crises developing – mortgage finance and the whole financial system should be built on principles like prudence, liability, responsibility, transparency and incentives toward conservative risk aversion strategies for all the players from Wall Street to Main Street. When trying to prevent another similar crisis from developing, decision makers should consider the following (more specific) measures:

Abolishing American non-recourse mortgages

Decision makers in the United States should seriously consider a radical change in the character of mortgage finance; first and most importantly, it seems to be necessary to introduce full-recourse mortgage loans instead of non-recourse ones. The missing liability of borrowers resulted in a massive wave of delinquencies and foreclosures in America. Mortgage loans were recourse in all other developed countries and foreclosure rates remained well below the American levels everywhere. Without making the loans recourse and thus reintroducing personal liability for the loans, it is hard to imagine how to increase the prudence of US borrowers, which declined sharply prior to the crisis. Other steps should be considered as well: it is possible to forbid second and third mortgages, to maximize LTV ratios at some reasonable level (at 80% for example), to forbid (initially very favorable) "teaser rates" and also to establish minimum requirements for borrowers (like loan to income ratios, FICO-scores measuring creditworthiness and documentation of income and assets). It means ending with subprime and Alt-A loans. The well-known NINJA loans (given to people with no verified income, job or assets) should never appear again on the scene. If these changes are made, it will be necessary to devote more attention to the defense of borrowers (against predatory lending) because they are going to be more vulnerable. However, many of the steps needed were already passed within various legislative measures like the Housing and Economic Recovery Act of 2008, which reformed the Truth in Lending Act (TILA), introducing the requirement that borrowers receive examples of how mortgage payments would change based on rate adjustments and information on the maximum possible payment under the loan terms (Barth et al. [2009]: 252).

Banning true-sale securitization

American-style securitization was one of the major factors behind the dramatic decrease of prudence on the lender's side. It enabled primary mortgage lenders to sell the loans they had and pass on the credit risk (to the next actor in the securitization chain). To reintroduce sound and prudent lending practices securitization should be limited to the European-style issuance of covered mortgage bonds. By issuing these bonds, lenders can collect the (long-term) capital necessary for financing the mortgages but – contrary to the previous practice – they should keep the mortgage loans on their balance sheets and should remain liable for the bonds they issued. In an ideal case, the bondholder will hold a threefold claim: first against the bank, second, if the bank goes bankrupt, against the bank's mortgage debtor (assuming that the loans are recourse), and third, if the debtor files for personal bankruptcy, against the real estate. Prior to the crisis, the holders of American mortgage backed securities had a claim just against the real estate (the collateral) itself. The role of second and third rounds of securitization – creating collateral debt obligations (CDOs) from MBS and other asset backed securities, or CDOs from CDOs – was seriously questioned by the crisis. This type of financial alchemy had no value added for society but played a key role in spreading and multiplying the crisis and creating the opaque and interconnected network of shadow banking which became too big and too interconnected to fail. Therefore, it makes sense to limit securitization to one single round of the issuance of the above-described covered bonds.

Decreasing leverage, increasing equity capital (of banks)

The financial sector (especially shadow banking) became so fragile prior to the crisis because of increasing leverage or, in other words, very low and decreasing equity capital relative to its assets and liabilities. This reduced the liability of financial corporations to dangerously low levels. Sinn (2010: 71) praises the principle of limited liability as capitalism's secret of success (a necessary and beneficial legal concept) but argues that prior to the crisis it was expanded so much by many financial firms that in the end they were hardly liable at all.

> "The disaster happened because the bacillus of limited liability, non-recourseness, and irresponsibility spread throughout the world, infecting the financial markets without the regulatory bodies doing anything to stop it. Banks, hedge funds, special purpose entities, investment funds, and real-estate financiers were able to do business almost without any equity. Those having no equity are not liable, and if not liable, they feel free to gamble. They will look for risk wherever it can be found, because they can privatize the profits and socialize the losses." (Sinn [2010]: 260)

One of the key lessons of the crisis is that it is absolutely essential to increase the equity capital of banks (i.e. all financial institutions) to restore liability, prudence and responsibility. Shareholders risking more of their own equity capital (and less the money of others) will have stronger incentives

for risk aversion. The gradual implementation of the Basel III package is certainly a step in the right direction because it will increase the mandatory minimal (equity) capital requirement for banks.[1] The problem is that it still prescribes the level of core capital relative to risk-weighted assets (called Tier-1 capital), which still should be calculated from the different risk assigned to various assets in a complicated way. (It is well known that in the past the best AAA ratings indicating the lowest credit risk were assigned to tranches of securities and government bonds that were later quickly downgraded to junk status.) The crisis showed clearly that it is very hard to find out which types of assets are riskier than others. In the future, it would be better to avoid these problems by simply putting one absolute capital ratio relative to total assets. Weighting the risk and categorizing all the assets is very much complicated and opens the doors for bypassing the rules, however specific they are. In the future, regulators should rather be cautious with very detailed, "super-specific" regulation because there are no such specific rules that cannot be circumvented and it is next to impossible to keep pace with financial innovation. Therefore, general simple rules applied across the board (for small, big and shadow banks altogether) are probably the best solution to ensure reasonable capital adequacy and avoid regulatory arbitrage. Absolute maximum leverage (let's say, 1 to 10 or 12) and a minimal capital ratio (around 10 percent) is required, and not risk weighted requirements (Roubini – Mihm [2010]: 214).

Shadow banks should be treated and regulated like banks

Considering the colossal losses and the staggering bill of bailouts (e.g. Fannie Mae, Freddie Mac and AIG), it is time to treat and regulate shadow banks[2] (including special off-balance sheet entities) as normal banks, including maximum leverage ratios and minimum capital requirements. The rule is simple: if it looks like a bank, regulate it like a bank. This can make regulatory arbitrage meaningless and is likely to limit moral hazard and the "too big to fail" problem.

[1] The minimum Common Equity Tier 1 and Tier 1 requirements will be phased in between 1 January 2013 and 1 January 2015. On 1 January 2015, banks will have to meet the 4.5% Common Equity Tier 1 and the 6% Tier 1 requirements. The total capital requirement remains at the existing level of 8.0% and so does not need to be phased in (Basel Committee on Banking Supervision [2010]: 28).

[2] With liabilities peaking at nearly $20 trillion in March 2008, shadow banking significantly surpassed the traditional banking system (Pozsar et al. [2010]: 4, FCIC [2011]: 32). Thanks to expanding securitization, the shadow banking system provided the increasing majority of funding for home mortgages.

Abolish mere betting and gambling, like "naked" CDS and "naked" short sales

Over the counter (OTC) derivatives, mainly credit default swaps (CDS)[3] played an important role in spreading the crisis and multiplying its effects. They also contributed to the dramatic increase in moral hazard that resulted in very high-socialized losses for the taxpayers (the bailout of the major CDS seller AIG, which became too big and too interconnected to fail). A universally agreed character of insurance is that one can only insure what one actually owns. Contrary to this, a naked CDS purchase means that somebody takes out insurance on securities without actually owning them, which is essentially nothing else than speculative betting. "*Worse, anyone who had placed a bet that someone would default had every incentive to make this happen. In these cases, purchasing a CDS was akin to buying homeowners' insurance on a house that you didn't actually own – and then trying to set fire to it*" (Roubini – Mihm [2010]: 199). Therefore, naked CDS should be banned, reducing CDS contracts to real insurance available for hedging only and not for speculation – these remaining CDS contracts should be dealt via a clearing house (similarly to financial futures) and – to reduce risks and moral hazard further – CDS sellers should hold capital backing similar to commercial bank capital adequacy ratios (Buckley [2011]: 283 and Roubini – Mihm [2010]: 201-202).

Regulators should also consider the ban on naked short sales or even all short sales. Short sales in principle destabilize the market by creating downward (when selling the borrowed shares) and upward (when repurchasing the shares) pressures that would not have existed in the absence of short sales (Sinn [2010]: 288). In the case of naked shorts, the "seller" does not even borrow the shares. Shorts provide a massive market force to manipulate prices for a group of investors speculating on price decreases. In the absence of shorting they still would be able to make profit with forward sales but without the ability to massively manipulate prices (ibid.). Therefore, the ban on short selling or at least naked short selling is another possibility for legislators to stabilize markets (temporary bans on shorts were repeatedly introduced by several authorities during the crisis).

[3] Credit defaults swaps (CDS) originally were financial instruments used as a hedge and protection for debt holders from the risk of default. CDS is designed to transfer the credit exposure: the buyer of a credit swap receives credit protection (making periodic payments to the seller), whereas the seller of the swap guarantees the creditworthiness of the product (mostly corporate bonds, ABS and CDO). The seller agrees to buy these assets from the buyer at par in the event of credit default. Thus, CDS contracts are very much like insurance but there is a huge difference, which led to serious consequences during the latest crisis. With insurance, the insurer has to have an insurable interest under which they can demonstrate a potential loss should the default occur (Buckley [2011]: 4).

Limit moral hazard created by government intervention; abolish Ginnie, Fannie, Freddie, FHA insurance, affordable housing goals and CRA requirements

Government incentives aimed at increasing home ownership rates in America (especially within lower and middle income groups and minority communities) created a grand-scale problem of moral hazard. Various actors could pass on the credit risk to the government and this resulted in a staggering cost for taxpayers. Primary lenders could sell the junk loans they made to the GSEs (Fannie Mae and Freddie Mac) or insure them at FHA and sell them to Ginnie Mae. Investors could buy MBSs created from these loans with guarantees given by these agencies explicitly or implicitly backed by the US government. This resulted in massive gambling where the gains were privatized and losses nationalized. To make things worse, Fannie Mae and Freddie Mac were allowed to operate with the highest leverage ever allowed for any financial institution. In principle, the federal government (basically any government) should not purchase, insure, securitize and guarantee mortgages or any mortgage related securities. The aims of social policy (regardless of how noble they are) should not be mixed with mortgage lending standards and financial regulation. Rather traditional, direct and simple measures (like supporting social housing, limited indirect help through some existing tax incentives) are needed that are transparent in costs for society and do not create hidden implicit deficits in public finances.

The government also should concentrate on ensuring the high quality and soundness of mortgage loans and not taking a leading role in the industry-wide degradation of lending standards, continuously decreasing the underwriting criteria (as it happened prior to the crisis). Therefore, policies like CRA requirements and affordable housing goals should not exist. The government should not tell the financial institutions which mortgage they are supposed or not supposed to buy. This can be very dangerous, as many politicians would give loans to everybody (i.e. to every potential voter) in a drive for popularity.

Change the incentives of shareholders and managers

Prior to the crises in the financial sector (especially shadow banking), short-term profit maximization was the strongest incentive for leading managers and for many shareholders. Managers were awarded with fat bonuses (in the case of leading traders and bankers, usually higher than base salaries), and shareholders with fat dividends resulting from high returns on equity (made possible because of very low equity to asset ratios). Therefore, they took ever-increasing risks and gambled regardless of the possible negative long-term consequences. Something has to be done with the bonuses encouraging risk taking and excessive leverage. One possibility is to compensate (apart from the base salary) traders with restricted shares in the firm (shares which have to be held a certain amount of time before they vest); these shares then could be sold just after, let's say, 5 or 10 years

or even a longer time (Roubini – Mihm [2010]: 186). This way traders and bankers would have the long-term health of the company also in mind. Another possibility in the case of traders is to create long-term bonus accounts (ibid. 188). In the case of bets that are paying off for the firm, bonuses are flowing into this account, but in the case of bets generating losses, money is deducted from the existing account. Traders are going to be awarded according to their long-term performance; their employers will average their performance over the course of several years and pay bonuses (if there are any) from the bonus account only after this period. Regulators might also consider the introduction of caps and taxes on bonuses. The most important thing is to apply the rules across the board for all financial institutions (which is possible only when the government is going to put the new rules into effect). Regarding the shareholders, the most effective tool was already mentioned above: increasing the level of mandatory equity capital. This by nature encourages a stronger risk aversion as shareholders have more of their own money at stake (and are risking the money of others to a lesser extent). The higher the required minimum equity capital (or lower the leverage allowed), the stronger are the incentives for shareholders to avert excessive risk.

A better regulatory system in America

The US legislators should consider the consolidation of the many regulatory agencies to one single body (of course, with many subdivisions) with a clear hierarchy and an ultimate responsibility for addressing systemic risk. This single regulator (which could be within the central bank, but not necessarily so) would have all the information to monitor systemic risk and to take coordinated action throughout the financial system. Furthermore, assuming that these universal rules are applied as proposed above, regulatory arbitrage would be meaningless.

Conclusion

The policy proposals indicated above are certainly not exhaustive; they rather form a minimum set of needed measures when trying to avoid a similar crisis from developing. On the other hand, the various steps are amplifiers; the more of them are adopted, the higher are the chances for success. On the contrary, if only one or a few measures are implemented (and the others watered down or not even tried), the results are likely to be insufficient, leading to contradictory results. In the era of extremely complex and interconnected financial sectors, only a complex set of measures could be a feasible solution to the problems, or, better to say, to most problems that resulted in the last financial crisis. One has to acknowledge that to prevent all financial crises from happening is a mission impossible even if all the proposed changes are fully implemented. Periodically arriving crises posed a persistent threat to economic development throughout history and it would be naive to think that it is possible to eliminate them forever. But this is not to say that we should resign from improving things based upon past experience.

References

Barth, James R et al. [2009]: *The Rise and Fall of the U.S. Mortgage and Credit Markets. A Comprehensive Analysis of the Market Meltdown.* The Milken Institute, John Wiley & Sons, Hoboken, New Jersey.

Basel Committee on Banking Supervision [2010]: *Basel III: A global regulatory framework for more resilient banks and banking systems*. Bank for International Settlements Communications, Basel, Switzerland.

Buckley, Adrian [2011]: *Financial Crisis. Causes, Context and Consequences.* Pearson Education Limited, Harlow, England.

FCIC – Financial Crisis Inquiry Commission [2011]: *The Financial Crisis Inquiry Report. Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States.* U.S. Government Printing Office, Washington D.C.

Pozsar, Zoltan – Adrian, Tobias – Ashcraft, Adam and Boesky, Hayley [2010]: *Shadow Banking*. Federal Reserve Bank of New York Staff Reports, no. 458, New York.

Roubini, Nouriel – Mihm, Stephen [2010]: *Crisis Economics. A Crash Course in the Future of Finance.* The Penguin Press, New York.

Sinn, Hans-Werner [2010]: *Casino Capitalism. How the Financial Crisis Came About and What Needs to be Done Now.* Oxford University Press, Oxford.

Centre off Excellence for Social Innovations at Comenius University

Center of Excellence for Social Innovation at the Comenius University in Bratislava (CESIUK) has ben established under the project "Global and local processes in Slovakia: the development of social innovation in terms of internationalization of the European Union". It is a unique project bringing together the highest quality researchers from different disciplines in research and forecasting of social innovation. The main objective of the Center of Excellence for Social Innovation is the development of human, social and cultural capital through research of strategic social innovation in the context of globalization, europeanisation and transformation in Slovakia and abroad.

Project is supported within the framework of measure 4.1, ”Supporting the Network of Excellent Research and Development Centres as a Pillar of Regional Development in the Bratislava Region“. “We support research activity in Slovakia./ Project is co-financed from EU resources”.

Contact

Web: **www.fphil.uniba.sk/cesiuk**

E-mail: **cesiuk@fphil.uniba.sk**