



## INNOVATIONS AND CHANGES IN PAYMENT SERVICES UNDER PSD2

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From 13 January 2018 payment services in the European Union are subject to the revised Payment Services Directive (PSD2). The changes introduced by PSD2 are often described as revolutionary. They include, for example, the regulation of services provided through fintech companies, and measures to increase security and consumer protection. The intention is that PSD2 will support a single harmonised electronic payments market across the EU, in line with developments in digital payments and innovations. (p. 2)

## MACROECONOMIC OUTLOOK FOR SLOVAKIA

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Slovakia's economic growth is currently strong and driven mainly by domestic demand. Going forward, exports are expected to become the main contributor to GDP growth, owing to the launch of new production capacity in the car industry. As a result, GDP growth is projected to accelerate to 4.3% in 2018 and 4.7% in 2019. As the growth-supporting impulses fade, the economy is expected to expand more slowly in 2020, by 3.8%. Given the favourable economic trends and resulting job creation, the unemployment rate is expected to fall to 6%. This should put upward pressure on wage growth and consequently be reflected in rising demand-pull inflation. (p. 8)

## PORTFOLIO VALUE AT RISK AND EXPECTED SHORTFALL USING HIGH-FREQUENCY DATA

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The main objective of this thesis is to investigate whether multivariate models using high-frequency data provide significantly more accurate forecasts of Value at Risk (VaR) and Expected Shortfall (ES) than do multivariate models using only daily data. We employ a parsimonious HAR model and its asymmetric version that uses high-frequency data for modelling of the realised covariance matrix. The selected benchmark models are the well-established DCC-GARCH and EWMA. The computation of VaR and ES is done through parametric, semi-parametric and Monte Carlo simulations. The loss distributions are represented by multivariate Gaussian, multivariate Student's *t*, multivariate distributions simulated by Copula functions, and multivariate filtered historical simulations. The following univariate loss distributions are used: GPD from EVT; empirical and standard parametric distributions. The main finding is that the VaR forecasting accuracy of the HAR model using high-frequency data is superior, or at least equal, to that of benchmark models based on daily data. Finally, backtesting of ES remains

very challenging; the forecasts were not credibly validated by the applied Test I and Test II. (p. 11)

## CONTENTIOUS ISSUES IN MONETARY POLICY

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This paper discusses current controversial issues of monetary policy using a broad set of economic indicators, a factor-augmented vector autoregression approach, and other methods. Focusing on short-term monetary policy tactics, it notes the following: (1) the People's Bank of China and the Bank of England should target the price level by influencing the money supply in the economy; (2) the Federal Reserve should also target the price level, but by influencing the volume of credit in the economy; (3) the Bank of Japan should target economic activity by influencing the money supply in the economy; and (4) the ECB should implement a diversified monetary policy in the euro area. (p. 17)

## THE COINTEGRATION OF GOODS EXPORTS AND IMPORTS, AND THEIR IMPACT ON MACROECONOMIC PERFORMANCE

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Recent decades have seen the external balance sustainability of many economies around the world come under increasing pressure from significant widening of current account and trade imbalances. In view of what has happened, we had strong reason to conduct a thorough examination of those determinants of the trade balance – as a current account proxy – which could considerably affect a country's external balance. Our primary objective was to perform a cointegration analysis of the long-term relationship between goods exports and imports, in order to assess the assumption that the external balance is sustainable. Consequently, we examined the export and import determinants of selected EU countries using aggregated and disaggregated export and import functions. The results point to exports having a significant impact on imports, and vice versa. Furthermore, ARDL model results imply the advisability of implementing policies aimed at diversifying extra-EU trade, diversifying industrial production, and reducing the energy and capital intensity of production. (p. 22)

## CENTRAL COUNTERPARTIES: RECENT TRENDS AND REGULATORY RESPONSES

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Central counterparties lie at the heart of the financial system. This article explains their main functions and discusses recent trends and regulatory initiatives in central clearing invoked by the mandatory clearing of standardised over-the-counter derivatives. (p. 28)