Abstract Diploma thesis deals with questions about financial sectors stability assessment. Within the theoretical part, overview of current state of research is presented, along with so-far reached frameworks for such an analysis on international basis. It focuses mainly of results obtained by two most renowned international financial institutions, International Monetary Fund and European Central Bank. The practical part of diploma thesis is dedicated to construction of aggregated Banking Sector Fragility Index (BSFI), and comparison of its outputs to actual banking sector fragility development in chosen countries. Second underlying motivation is to test, whether evolution of BSFI for given countries coincide with "hypothetical banking sector crisis" model. The model is also introduced in the thesis. BSFI is constructed for 6 countries, and obtained results are discussed with respect to mentioned motivation in 3 of them, for banking sectors of Czech Republic, Estonia and Japan.