Increasing volume of research shows that both theoretical assumptions and empirical fit of traditional mean-variance and CAPM frameworks are flawed. Hence, other risk measures are gaining popularity. Downside risk measures not only represent the theory well, they are also significant in explaining variations of stock returns. Most importantly, the definition of risk they provide is more in line with perspectives of investors. We have carried out extensive testing on a sample of companies from the Czech Republic, Germany and Poland. Our results show that Semivariance with respect to zero is the most significant risk measure while CAPM beta by itself has little use. Finally, we also analysed importance of idiosyncratic risk on CEE shares and found out that it is indeed priced on the Czech and Polish stock markets but not in Germany.