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Haitong Bank in a report from May 7 (08:00) keeps a BUY rating on Ten Square Games and lifts FV to PLN 180.5 (from PLN 133) as analysts upgraded 2019E/20E revenue forecasts by 24/15% and 2019E/20E net income by 34%/20%, respectively.

**Valuation Methodology**

We value TSG using three valuation methods: DCF, EV/EBIT and P/E where each method has an equal weight. Using DCF, we value TSG at PLN 190.43/share, P/E at PLN 190.6/share and using EV/EBIT at PLN 160.5/share. Our final fair value is PLN 180.5/share and implies 41% upside.

DCF

We use a 5-year free cash flow period. The valuation is based on 2019-2023E FCF forecasts, net debt is at end-2018, the risk free rate is set at 3.5% during the forecast period and at 4.5% in the terminal value. We set the terminal growth rate (TV) at 3.0% to reflect the prospective global mobile free-to-play market.

Multiples valuation

In the multiple valuation method, we use EV/EBIT and P/E multiples for 1YF/2YF/3YF (or 2019E-21E). We use a large group of companies from the global gaming industry where the majority or part of their business activity is related to the production of mobile games.

**Risks to Fair Value**

Macro risks: TSG produces and sells entertainment goods whose consumption is related to the economic strength of households or individuals. Changes in macroeconomic factors in the global market, such as the GDP growth rate, household income and expenditure levels and remuneration levels can have an impact on TSG revenues.

FX risks: TSG incurs significant personnel costs and expenses related to the production of games in PLN, while a significant part of revenues is generated in foreign currencies. In 2017 USD and EUR represented ca. 69% of total revenues. The appreciation of PLN against USD and EUR may, by lowering revenues from sales with fixed costs, incur costs in PLN and negatively affect TSG's financial results.

Ad market risk: in 2017, ca. 33% of total revenues came from advertising whose budgets are susceptible to economic fluctuations.

Competition risk: Free-to-Play (F2P) and the mobile game market have relatively low entry barriers for new entities and easy access to global distribution of new products which results in considerable competition in the market.

Dependence on key distributors: Over 50% of TSG's revenue is generated by games that are distributed by Google, Facebook and Apple through their digital distribution platforms or online portals. A possible change in Google, Facebook and Apple policies regarding the acceptance of products for distribution would require TSG to adapt existing or future products, which may be difficult to achieve in the short term and generate additional high costs. The reliability of the IT systems of distributors, which allows effective sales of TSG products, is also important as failure can lead to disadvantageous situations like: (1) lack of access to the game for existing players; (2) lack of micropayments by players using a given game; (3) inability of potential new players to download the game.

Workforce risk: Personnel are TSG's key asset. The lack of a qualified workforce and higher-than-expected salary pressure may negatively affect the achievement of TSG's strategic goals and its financial results.



**Key personnel risk:** The competence and know-how of key employees, in particular those who form the management team, as well as management and game designers, are very important for TSG's operations. The departure of people from these groups may result in TSG losing knowledge and experience in the field of professional game design.

**Technology risks:** (1) TSG uses the Unity 3D engine in the process of game production, periodically purchasing a subscription with access to this technology. There is a risk that fees may increase to a level negatively affecting the profitability of produced games. (2) There is a risk that new technology appears to which TSG will not be able to adapt quickly, thus it may negatively impact its competitive market position. A new technology risk occurs mostly in Evergreen and Legacy types, characterized by a longer and demanding process of game production.

**Delays in game production:** Game production is a complex and multistage process, dependent not only on the human factor and the implementation of the next stages of work on the game, but also on technical factors. Failure to meet the planned production schedule may delay the game's release, which in turn may have a negative impact on the sales level of the product and prevent TSG from achieving the expected financial results.

**Concentration of revenues on one type of game:** TSG's games have different levels of popularity, which indirectly also affects the amount of revenue from games released. The leaders in popularity are Evergreen games - Let's Fish and Fishing Clash - which in 2017 generated in total ca. 61% of revenues. TSG' Evergreen and Legacy games are predominantly sports and simulation themes. These productions manage the theme area for a particular hobby. There is a risk that if the preferences of TSG product recipients change, the popularity of the games in TSG's portfolio may decrease.

**RODO implementation:** The RODO introduces an increase in the obligations of personal data administrators and data processors on behalf of administrators. If the regulations of the RODO are violated, TSG may in particular be at risk of paying high fines, which may adversely affect the financial position of the Group.

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