

Intangible Asset Market Value Study?

By Cate M. Elsten and Nick Hill

The “Intangible Asset Market Value” (IAMV) study conducted by the authors examines the components of market value, and specifically the role intangible assets play in corporate market capitalizations across a range of indexes around the world.¹ We believe IAMV is a strong reflection of innovation in the greater economy. This is consistent with a *Reuters* article on its list of *Top 100 Global Innovators* which shows organizations that invest in intangible assets such as patents and research & development (R&D) continually outperform the S&P 500.² As seen in Figure 1, intangible asset value has continued to grow as the major component of the S&P 500’s market cap over the past decade.³

While emphasis often falls on technology-driven intangible assets such as patents and trade secrets, brand value is also an important component of IAMV.

This year for the first time we compared certain of its IAMV calculations to Interbrand’s calculation of top 100 companies worldwide by brand value.⁴ For 39 companies appearing on both the S&P 500 and the Interbrand list, this comparison suggests brand value may represent roughly one-fourth or more of IAMV on average.⁵

Also for the first time this year, we have expanded its IAMV Study beyond the S&P 500 to explore the components of value in several key international markets. Stock market indexes from Europe, China, Japan, and

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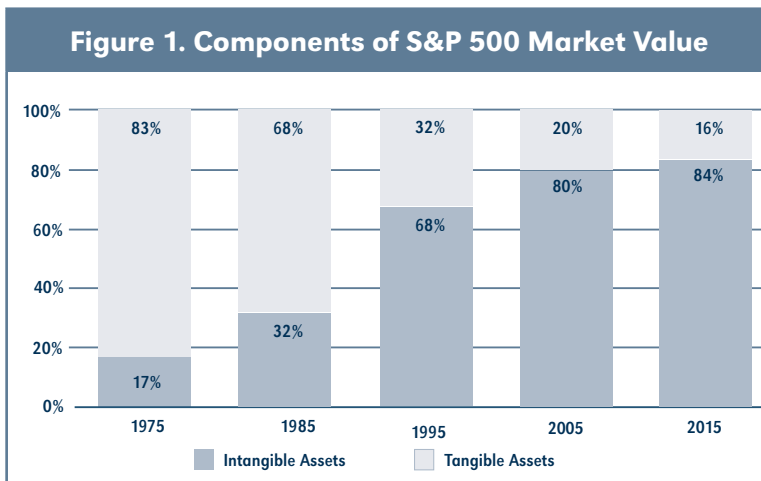
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South Korea were selected and analyzed to determine the role intangible assets play in market value. We selected these four geographies as representing the largest non-U.S. markets for intellectual property.⁶ A summary review of results is as follows:

S&P Europe 350

The S&P Europe 350 index comprises 350 leading blue-chip companies from 16 developed European markets. The authors analyzed the index from 2005 to 2015 to determine how IAMV has changed over time.

As depicted Figure 2, IAMV was comparable at the beginning and end of the ten-year period, with a dip in between that may have been due to the global financial crisis that began in late 2007. Compared to other developed regions, Europe’s overall economy has been slower to recover, as euro-zone GDP in the final quarter of 2015 was still below pre-2008 levels. The financial crisis appears



1. “The Intangible Asset Market Value” study is released annually by Ocean Tomo, LLC, the intellectual capital merchant bank™ firm.

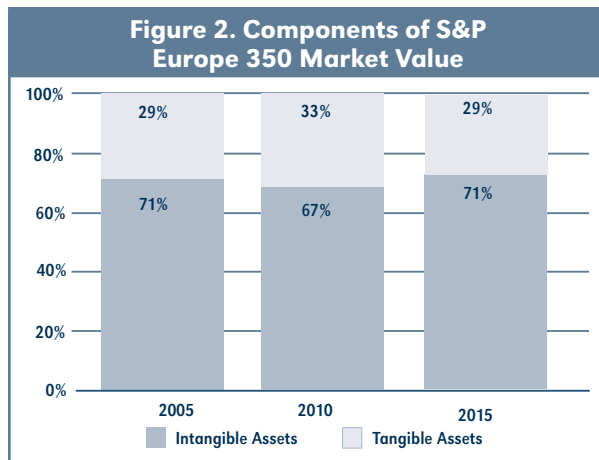
2. “Innovative Organizations With Intangible Assets Are More Successful Than Counterparts,” *Reuters*, (October 8, 2013) accessed: <http://www.reuters.com/article/us-innovative-organizations-idUSBRE99707E20131008>.

3. We calculate IAMV on a company-by-company basis using data from publicly available financial statements on Bloomberg. IAMV is determined by subtracting a company’s net tangible asset value from its market cap to determine its net intangible asset value. Company data is aggregated for the index, and net intangible asset value is then divided by market cap to determine the portion of the index’s value that is derived from intangible assets. Companies with insufficient data were excluded from the calculation.

4. *Interbrand Best Global Brands*, (2016) 13.

5. Ocean Tomo and Interbrand are unrelated entities and there is currently no means of comparing data and methodologies for the two relevant studies in detail. Therefore, this comparison should be considered approximate rather than precise.

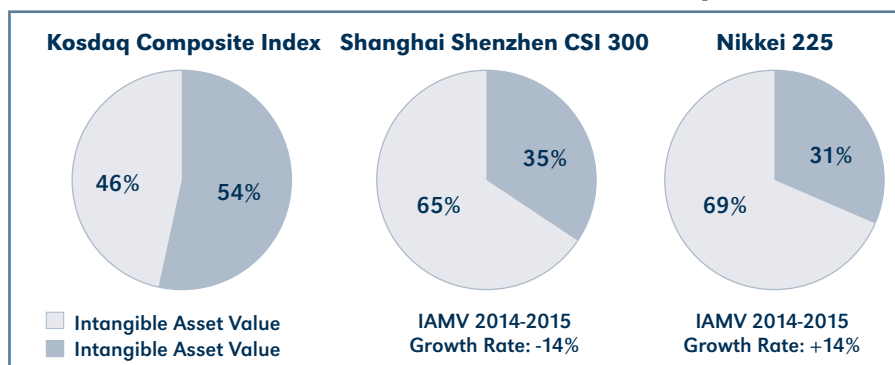
6. “World Intellectual Property Indicators 2015,” *World Intellectual Property Organization*, 23.



to have had a specific impact on Europe's innovation economy. According to a publication from the European Commission, Europe has recently lagged behind countries like Japan and South Korea in terms of innovation, but plans to focus on this more heavily in the future to help boost the overall economy.⁷ Current innovation activity levels notwithstanding, Europe remains second only to the U.S. in the relative contribution of intangible assets to market capitalization as measured by this study and is still well ahead of the major Asian markets. As Europe begins to invest more in technology and the European patent marketplace, we may see a rise in intangible asset value in the next several years. At this time, it is too soon to tell how the Brexit vote may impact this.

Asian Markets

The authors also analyzed IAMV for major Asian equity markets. Due to unavailability of comparable data, we limited its analysis to 2015. Based on the data, IAMV appears to be a much smaller component of overall market cap in Asia than in Western economies. The pie charts below show a breakdown of the components of market value for three Asian indexes in 2015.



7. "Innovation Union: A Pocket Guide on a Europe 2020 Initiative," European Commission, 3. https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/innovation-pocket-book_en.pdf.

Shanghai Shenzhen CSI 300

China's Shanghai Shenzhen CSI 300 Index is a free-float weighted index comprising 300 A-share stocks listed on the Shanghai or Shenzhen Stock Exchanges. IAMV for this index is approximately half of that for the S&P Europe 350 and analysis shows IAMV fell 14 percent from 2014 to 2015. Although care must be exercised when examining limited data points, this downward movement may be linked to China's slowing economy. According to an article from the *New York Times*, China's economic growth for 2015 was the slowest in 25 years.⁸

China's patent office, the *State Intellectual Property Office* (SIPO) is still relatively young, as its predecessor (the Patent Office of the People's Republic of China) was founded in 1980. This, along with the role of traditional manufacturing in the Chinese economy, could in part explain why intangible asset value is a much smaller percentage of overall market cap than in more established Western markets. As China begins to predictably enforce patent rights and reform infringement recoveries, and as Chinese companies begin to file more patents and buy patents in foreign markets, Chinese IAMV could change dramatically in the future.

Nikkei 225

Japan's Nikkei 225 Stock Average is a price-weighted average of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange. IAMV grew 14 percent in Japan from 2014 to 2015, indicating Japan's continued recovery from the global financial crisis. However, IAMV seems to be a somewhat surprisingly small portion of the Japanese economy as measured by this study. We believe this could be in part due to Japan's loss of tech share to countries such as China and South Korea, which have become innovation powerhouses in the past several years with the rise of companies such as Huawei, ZTE and Samsung. The BBC reported that several Japanese electronics giants have suffered in recent years due to the global shifting of technology from complex electrical machines to software-rich devices

that favor new competitors from South Korea and China.⁹ Adapting to this "new tech" will likely be a priority for Japanese companies in the future and may impact future IAMVs.

8. "As China's Economy Slows, a Look at What Could Happen," *The New York Times*, (October 18, 2016). http://www.nytimes.com/2016/10/19/business/international/china-economy-slows-impact.html?_r=0.

9. "What Happened to Japan's Electronic Giants?," *BBA News*, (April 2, 2013). <http://www.bbc.com/news/world-asia-21992700>.

Kosdaq Composite Index

Korea's KOSDAQ Index is a capitalization-weighted index that measures the performance of the KOSDAQ market, a collection of South Korean equities. The data shows an increase in IAMV over the past two years. An article from German broadcaster *Deutsche Welle* commented that "Innovation and technology are the key factors that have underpinned South Korean export competitiveness and fueled the country's remarkable economic rise over the past decades."¹⁰ In addition, the 2016 *Bloomberg Innovation Index*, which ranks countries based on different categories including R&D, high-tech companies, manufacturing, research personnel, patents and education, ranked South Korea as having the world's most innovative economy, ahead of Germany, Sweden, Japan, and Switzerland.¹¹ This surge in tech activity appears to be reflected in South Korea's relatively high IAMV compared to the other major Asian economies.

Comparing Geographic Regions

As an initial matter, when comparing geographic regions it is important to bear in mind the impact of differing accounting standards. For example, *International Accounting Standard (IAS) 38*, effective March 2004, allows for circumstances in which internally generated intangible assets can be recognized on the balance sheet and capitalized over the life of the asset, as opposed to being expensed as development costs.¹² Many countries, including South Korea and some European countries have adopted this standard.¹³ In Japan, IAS 38 is currently optional, however, as of January 2015, 62 companies with over \$650 billion of market cap on the Tokyo Stock Exchange had adopted IFRS.¹⁴ Similar to IAS 38, China's accounting standards call for recognition of internally generated development costs as intangible assets if they meet certain requirements.¹⁵ The U.S., on the other hand, follows GAAP which in most cases calls for ex-

pending development, maintenance, and restoration costs of internally generated intangible assets as they occur¹⁶ and limits balance sheet recognition of most intangible assets to those that are acquired as part of a purchase or other business combination. In theory this should have the directional effect of depressing U.S. IAMV relative to countries allowing more liberal balance sheet recognition of self-created intangibles. However, the magnitude of these differences cannot be readily calculated with currently available data.

Beyond these reporting differences, questions remain as to why various geographic regions display their relative IAMV positions. For example, a study by the *Global Intellectual Property Center (GIPC)*, which is similar to the 2016 *Bloomberg Innovation Index* study but with some difference in criteria, ranks countries based on a variety of categories related to IP to determine each country's overall IP score.¹⁷ Consistent with the IAMV calculations prepared by the authors, the GIPC study ranks the U.S., UK and France as the top three countries with the strongest IP environment. Japan is ranked sixth by the GIPC, which notes that Japan has "significant weaknesses in its participation in international IP treaties."¹⁸ However, China ranks much lower on the GIPC list, nearly 12 points behind Japan. The GIPC study states that while China has made some improvements in recent years in patent rights, enforcement and rapid movement of counterfeiting still remain challenges.¹⁹ These results appear at odds with the IAMV analysis. As more comparable data points become available, the underlying reasons for the relative IAMV positions of different economies will be studied in more depth.

In conclusion, data spanning more than a quarter century for the U.S. make it clear the economy is inverting from one where value was measured by "touch" to one where value is driven by thought. This change has been no less significant than the industrial revolution more than a century ago. Although a similar time series of data is not available for European and Asian markets, simple observation of the nature of companies that increasingly dominate these economies suggest something of the same nature has occurred and is likely continuing to occur there. Further data and analysis will be available as time progresses, and are required to more fully understand and predict innovation trends. ■

Available at Social Science Research Network (SSRN): <https://ssrn.com/abstract=3009783>

10. "Why Innovation is King in South Korea," *DW.com*, (February 10, 2016). <http://www.dw.com/en/why-innovation-is-king-in-south-korea/a-19038625>.

11. *Ibid.*

12. "IAS 38—Intangible Assets," *IASPlus*. <https://www.iasplus.com/en/standards/ias/ias38>.

13. "Use of IFRS by Jurisdiction," *IASPlus*. <https://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs#Note12>.

14. Japan also permits companies to use Japanese Accounting Standards or US GAAP, both of which call for expensing internally generated intangible assets as research and development costs as they incur. "IFRS as Global Standards: A Pocket Guide," *IFRS Foundation*, (2015) 95. <http://www.ifrs.org/Use-around-the-world/Documents/IFRS-as-global-standards-Pocket-Guide-April-2015.PDF>; Ernst & Young, "JGAAP-IFRS Comparison," <https://www.shinnihon.or.jp/services/ifrs/issue/ifrs-others/other/pdf/ifrs-jgaap-comparison-v30-E.pdf>.

15. "Accounting Standard for Business Enterprises No. 6—Intangible Assets," *Laws of the People's Republic of China*. <http://www.asianlii.org/cn/legis/cen/laws/asfben6ia630>.

16. "Goodwill and Other Intangible Assets—Key Differences Between U.S. GAAP and IFRSs," *USGAAPPlus*. <https://www.iasplus.com/en-us/standards/ifrs-usgaap/goodwill>.

17. "Charting the Course," *Global Intellectual Property Center*, Second Edition (January 2014) 29.

18. *Ibid.*

19. *Ibid.*, 30.