

## Virtual Piggy

(VPIG-OTCQB)

**VPIG: OINK – PayPal For the Tween and Teen Market; Initiating With a Buy Rating**

### OUTLOOK

Virtual Piggy's *Oink* is an online and mobile payment solution. Management believes it is the only solution that complies with U.S. and international regulations governing online spending by minors, ensuring the security of a child's personal information when making online purchases. Our positive outlook on Virtual Piggy is based on expected benefits to parents, merchants and minors of using *Oink* and potential upcoming catalysts, including a recently announced partnership with Facebook, integration with key gaming sites and the company's plans to ramp-up its marketing efforts.

<b>Current Recommendation</b>	<b>Buy</b>
Prior Recommendation	N/A
Date of Last Change	09/17/2014
Current Price (09/16/14)	\$1.12
<b>Six- Month Target Price</b>	<b>\$2.00</b>

### SUMMARY DATA

52-Week High	\$1.98
52-Week Low	\$0.78
One-Year Return (%)	-43.4
Beta	-1.22
Average Daily Volume (sh)	51,470

Shares Outstanding (mil)	117
Market Capitalization (\$mil)	\$131
Short Interest Ratio (days)	35.4
Institutional Ownership (%)	0
Insider Ownership (%)	16.6

Annual Cash Dividend	\$0.00
Dividend Yield (%)	0.00

5-Yr. Historical Growth Rates	
Sales (%)	N/A
Earnings Per Share (%)	N/A
Dividend (%)	N/A

P/E using TTM EPS	N/A
P/E using 2014 Estimate	N/A
P/E using 2015 Estimate	N/A

Zacks Rank	N/A
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Risk Level	High
Type of Stock	Small-Growth
Industry	Internet-Services
Zacks Rank in Industry	N/A

### ZACKS ESTIMATES

#### Revenue

(in millions of \$)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2011	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
2012	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
2013	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
2014	0.0 A	0.0 A	0.0 E	0.0 E	0.0 E

#### Earnings per Share

(EPS is operating earnings before non recurring items)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2011	-\$0.01 A	-\$0.01 A	-\$0.01 A	-\$0.01 A	-\$0.04 A
2012	-\$0.02 A	-\$0.06 A	-\$0.02 A	-\$0.01 A	-\$0.11 A
2013	-\$0.03 A	-\$0.03 A	-\$0.05 A	-\$0.04 A	-\$0.15 A
2014	-\$0.07 A	-\$0.05 A	-\$0.05 E	-\$0.05 E	-\$0.21 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**  
Disclosures begin on page 20.

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## KEY POINTS

- Virtual Piggy offers what management believes is the **only online payment solution that complies with U.S. and international regulations governing online spending of minors**, ensuring the security of a child's personal information when making online purchases.
- Specifically, *Oink*'s patented process for allowing children under 18 to purchase in a COPPA compliant manner does not reveal any personally identifiable information about the child.
- **The company's target market, kids age 14-18, has substantial spending power** and represents the first generation to grow up with e-Commerce, which we believe makes them highly susceptible to problems if their online spending is unchecked.
- The company's solution offers parental controls including spending limits and also serves as a teaching tool for children to learn financial management.
- With more than one million registered users, company is launching marketing campaigns to grow its merchant and user bases. As more merchants come on-board, we believe this, in turn, makes the service more attractive to users, who likely will increase their engagement and spending on the site and app.
- The *Oink* Discover card also provides an attractive add-on for use at bricks-and-mortar merchants, in our view.
- *Oink* allows merchants to monetize their e-commerce sites, driving new traffic and transactions from kids who currently cannot spend online because they may not have a credit card or Paypal account.

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## OVERVIEW

Virtual Piggy (VPIG-OTCQB) is a technology company operating an online money management site that enables teens and tweens without credit cards of their own to **make online payments safely**. The product, *Oink*, also allows parents to impose parental controls and monitor their children's online and mobile spending. The company only recently began marketing its service to consumers and has not yet generated much revenue. Since launching commercial operations in 2012, the company has focused on building the infrastructure to make Virtual Piggy successful. 2012 was dedicated primarily to signing and integrating online merchants. In 2013, the company began to focus greater effort on driving user adoption. The company reached the one million user milestone in early 2014 and its strategy this year has been to promote the service to merchants, parents and children in order to grow the user base and drive usage domestically and in Europe.

**Our positive investment thesis is predicated on what we see as the benefits to parents, merchants and minors of using *Oink*** as an online and mobile payment mechanism. With an interface that is simple and free for parents and teens to use, parents' ability to monitor spending and use *Oink* as a teaching tool and merchants' need for a regulatory compliant payment solution for the under-18 market, we believe that *Oink* usage could grow dramatically. In our view, potential catalysts for growth include a recently announced **partnership with Facebook** (FB-not rated), integration with key gaming sites and the company's plans to ramp-up its marketing efforts.

On August 28, 2014, management announced that it had integrated with Facebook in the U.S. Management believes the Facebook relationship is a likely catalyst to drive *Oink* user registration and recurring usage. About 52 million of Facebook's domestic users are under 25 years old, according to a Dazeinfo study. Facebook currently restricts its site to users age 13 and older. However, trade publications have indicated that it was considering providing younger children access to the site, under parental supervision. With *Oink*'s technology helping to protect their identities, this could make it easier.

Virtual Piggy management also believes that adding new online gaming partners could be a catalyst for significant growth of its user base and of regularly recurring usage. As the pool of merchants that accept *Oink* grows and the site begins to offer a broader selection of services and products, *Oink* will likely

become increasingly more useful and attractive to teens and tweens, in our view. The company has announced agreements with several online gaming sites such as Ubisoft [UBSFY- not rated], which has more than 74 million users and Wargaming, which has over 75 million users. Announcements of new gaming deals has increased following E2 in June 2014 and Virtual Piggy has indicated that it is also working with BANDAI NAMCO Games America to make mobile content such as *Pac-Man* available.

The online payment solutions business is intensely competitive, but no other solution provides a COPPA compliant platform directed at the under 18 market, according to management. The teen and tween market, although under-served by online payment vendors, represents an attractive demographic for merchants. There are more than 20 million teenagers in the U.S. and more than 800 million worldwide who have access to – and influence over – billions of dollars of discretionary spending.

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## COMPANY DESCRIPTION

### ***Parental Controls Make Oink Attractive to Parents***

Technology company Virtual Piggy provides what it believes is the only e-commerce payment solution that is regulation compliant for teens and tweens, a market that has surprisingly robust spending power and is increasingly targeted by merchants. The company operates an online money management site that serves as a virtual piggy bank and payment system for children under the age of 18, akin to PayPal for the younger demographic. The technology allows parents to allocate funds to their children's digital account, and then monitor how those funds are spent and saved. Parental controls allow the parent to establish the rules under which the child can use the funds. For example, if a parent has indicated that certain retailers are off-limits, the account will not enable payment. The company believes this is a safe environment for children's online spending, protecting their privacy and enabling parents to limit and monitor spending through controls and tracking reports. Moreover, *Oink* will automatically reject payment attempts on items that are prohibited to minors, such as alcohol, tobacco and other products.

### ***Benefits to Parents***

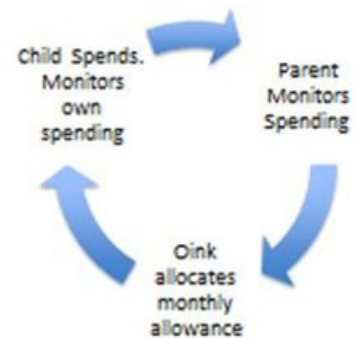
The site allows teens and tweens to make online expenditures without a credit card. Parents authorize funds to their child's account, effectively providing a digital allowance to their children. They can also set limits on how much a child can spend on a daily, weekly or monthly basis or even in a single transaction. The site keeps track of all spending and parents can access the information. Parents can also use the site as a financial teaching tool, allowing their children to budget their own spending. We believe the teaching aspect of *Oink* is attractive for parents, particularly as roughly 25% of children 16-18 have borrowed from their parents, other relatives or friends, according to a 2006 Charles Schwab Foundation study. This same study also found that 64% of 16 to 18 year olds believe that they could easily overspend. Moreover, because tweens and tweens represent an attractive market, merchants actively advertise to them, which we believe is another reason parents would view *Oink* positively.

## Easy to Set Up *Oink* Account

### One Time Setup

- Parent sets up account
- Add payment method(s) to *Oink* wallet
- Creates child accounts
- Allocates monthly allowance
- Determines allowed merchants and games
- Sets up billing and shipping details

### Ongoing Use



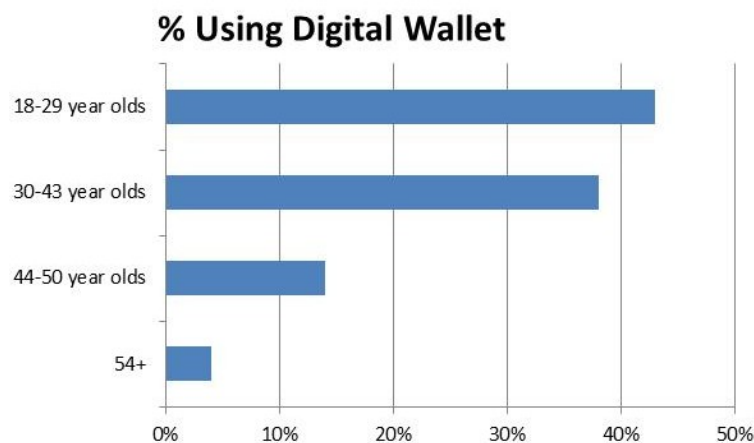
Source: Company reports

*Oink* is easy for parents to use. After an initial set-up, the interface allows parents to impose controls over how much and where their children are spending the money that parents have deposited in the *Oink* account. Moreover, *Oink* is free to parents and children. The company's business model relies on collecting fees from merchants based on the value of the transaction.

### **Benefits to Kids**

A key benefit to parents and kids, in our view, is that *Oink* protects kids' identities. Moreover, *Oink* is easy for children to use. A dashboard provides a snapshot of his or her financial position, i.e. how much money the account had originally, what the current balance is, what has been spent, what has been earned and what has been donated. The dashboard is accessible online and through mobile devices. Children get access to their own funds and learn how to budget their spending.

**We believe kids would choose to use an *Oink* digital wallet if they were given access.** As illustrated in the chart below, the percentage of people who use digital wallets is highly correlated to age group. Not surprisingly, a higher percentage of younger respondents – who are more comfortable with online and mobile applications – indicate that they use a digital wallet.



Source: Statista 2014

In our view, *Oink* will become increasingly more useful and attractive to teens and tweens as it begins to offer a broader selection of services and products. Moreover, the Discover backed *Oink* card (see below) could also enhance *Oink*'s attractiveness, we believe.

## **Benefits to Merchants**

Virtual Piggy's business model is to provide *Oink* for free to parents and children and to collect a fee from merchants. We believe merchants are accustomed to paying the 2%-3% fee, similar to fees they pay to credit card companies or online payment mechanisms such as PayPal. Moreover, we believe there are significant benefits merchants derive from using *Oink*. *Oink* allows them to collect payment from children and teens using technology that complies with regulatory privacy rules. This also makes it easier for them to market to this attractive market, in our view, and drive traffic and e-commerce and m-commerce.

*Oink* also helps merchants reduce *friendly fraud* or chargeback fraud, which occurs when a consumer makes a purchase online using their credit card and then cites it as an unauthorized transaction and receives a refund. Visa (V-not rated) estimates that in 2012, \$11.8 billion was lost to friendly fraud. It represents roughly 18% of total fraud reported by online merchants, according to the September 2013 LexisNexis *Trust Cost of Fraud* study. Moreover, a merchant that has more than 1% of their charges reversed is at risk of being dropped by major credit card companies.

When children use their parents' credit cards, parents often dispute the charges as unauthorized. *Oink* helps protect merchants against friendly fraud through parental controls, which allows parents to pre-approve their children's e-commerce purchases. With *Oink*, parents have authorized the funds in advance and have also prohibited transactions at any sites on which they do not want their children to make purchases. This process is expected to reduce the likelihood of a parent later denying having provided authorization.

*Oink* is also easy for merchants to use, as it is integrated with the major U.S. payment processing portals, including Chase Paymentech, CyberSource, Authorize.Net and PayPal and can process transactions from major credit and debit cards. In addition, it has also integrated with many of the leading e-commerce platforms including Ebay's Magento, Demandware, Oracle ATG and Live Gamer.

## **IP and Patent Portfolio**

The company holds three issued patents in the U.S. related to minors and privacy: *Systems and Method for Verifying the Age of an Internet User*, *System and Method for Virtual Piggy Bank Wish-List* and *System and Method for Virtual Piggy Bank*. This last patent, which management refers to as its **secret sauce**, was issued last month. It covers the process by which *Oink* can provide certain parental control preferences over youths and children under 13 when they purchase through *Oink*, creating a secure mechanism for children to implement online and mobile transactions in a COPPA-compliant manner. Management believes this patent could be a strong competitive advantage for *Oink*.

The company has also filed for five additional patents, which are pending. The company has also been granted two patents in Germany: *Virtual Piggy Bank* and *Parent Match*. Under the Patent Cooperation Treaty, the company also has patents pending in Australia, Brazil, Canada, where *Parent Match* has been allowed, Europe, and Korea.

## **Building the Infrastructure for Success**

The company was founded in 2008 by Dr. Jo Webber and Pradeep Ittycheria. Dr. Webber holds a Ph.D. in Quantum Physics and has a strong track record in developing and monetizing technology companies. Pradeep Ittycheria is an industry veteran with more than 14 years of experience. Jo Webber became CEO in March 2012, after which the company's efforts to drive merchant integration and user sign-ups began to accelerate. That same year, the company also hired a Chief Marketing officer.

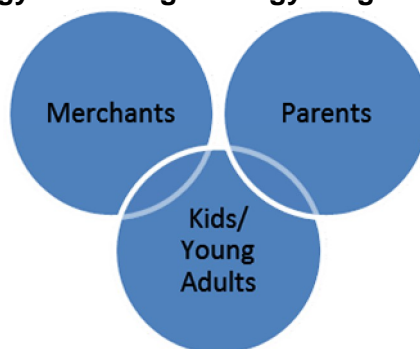
Since 2012 when Dr. Webber became the company's full-time CEO, Virtual Piggy has focused on building the infrastructure to make *Oink* successful. *Oink* had a soft launch in 2012, but the year was dedicated primarily to signing and integrating online merchants. The company has more than 20 merchants live currently and continues to sign and integrate additional online gaming and retail merchants.

After completing its system build-out and acquiring and integrating its initial merchants in 2012, management turned its attention to driving user adoption. Virtual Piggy rebranded as *Oink* in 2013, and launched in Europe. *Oink* has now reached over one million system users, an important milestone that management believes will facilitate its ability to grow the merchant pool and, in turn, fuel further user expansion. Management's strategy is to market to parents, under-18 users and merchants, in order to grow the user base.

Management intends to ramp-up its promotional efforts following the Facebook and *Oink* card launches. The company also plans to co-market with existing merchants to raise awareness of *Oink* and drive customer registration and usage. Ongoing promotional efforts include garnering press coverage in trade publications and blogs and joint marketing with advocacy groups for protecting children's privacy.

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### Virtual Piggy Marketing Strategy Targets Key Demos



Source: Company reports

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## MERCHANTS, RETAILERS, ENTERTAINMENT AND GAMING SITES

The company has signed agreements with over 140 merchants, e-commerce platforms, payment processors and channel partners. Currently, roughly 20 merchants have been integrated and are using *Oink* live as a payment mechanism. Merchants that are already integrated include Journeys, Fathead, Habbo and Gaia Online, among others. The company is also integrating with Wargaming, Wet Seal and Facebook, among others. The universe of integrated merchants is still fairly small and management is growing its merchant network in order to make *Oink* more useful and appealing. Management understands that if the user finds a varied assortment of popular merchants, *Oink* will become more useful to a growing group seeking a safe payment mechanism. Key categories that Virtual Piggy targets for adding new merchants include entertainment, gaming, schools and education, among others.



**The partnership with Facebook could be an important catalyst for driving user signings and recurring usage**, management believes. Some 52 million Of Facebook’s domestic registered users are under the age of 25, according to Dazeinfo. Online magazine *Information Week* has indicated that Facebook and Twitter are exploring ways to drive e-commerce on their sites. Some Facebook ads will include a *Buy* icon enabling a purchase. With *Oink*, Facebook can also extend its e-commerce initiative in a COPPA compliant way. Moreover, Facebook could drive greater awareness of *Oink* and fuel user registration for children who want to use the service to transact on other sites, as well, in our view.

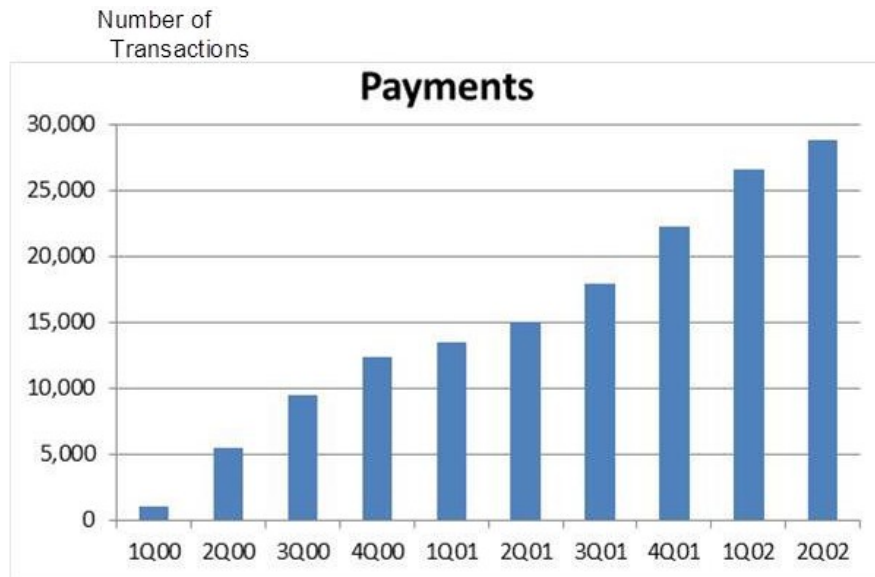
VPIG’s marketing strategy includes a B2B outreach program and leveraging social media to raise awareness of *Oink*. The company also attends trade shows to meet with target merchants. We believe merchants will be receptive. Marketers are already accustomed to paying a fee to credit card companies and, according to Market Strategies International, there is “the belief among merchants that [alternate payment] methods will be less expensive than traditional credit card processing fees.” In addition, merchants benefit from having a COPPA compliant payment option and we believe Virtual Piggy will also likely stress the benefits of reducing *friendly fraud*, as noted.

#### ***Oink Card for Bricks & Mortar Shopping***

This month, the company expects to launch an *Oink* prepaid card, following a February 2014 agreement with Discover Financial Services (DFS-not rated). The *Oink*-branded Discover card will be linked to the online account. It will enable *Oink* users to shop in the more than 25 million locations worldwide that accept the Discover Card, dramatically enhancing the flexibility and usefulness of the *Oink* service, in our view. Discover Financial Services has indicated that the Discover brand has the highest acceptance among the top 100 U.S. retailers and adds 5,000+ additional merchants daily. Children will be able to use the card at bricks-and-mortar stores under the same parental controls that parents have established for their online accounts. Parents will be able to control payments through the *Oink* dashboard, add funds, monitor spending, authorize and prohibit categories, just as they control online spending. The company believes the card will drive both user registration and merchant signings.

#### ***Expanding Merchant Pool Can Driver Users, Usage***

Virtual Piggy has just recently begun to market its services to consumers and has not yet generated much revenue. However, as the pool of merchants that accept *Oink* grows, we would also expect the registered user base to grow, as the site begins to offer a broader selection of services and products and therefore becomes more useful. Using PayPal as an analogy, PayPal also struggled to grow user registration in its early days. PayPal’s agreement with e-Bay (EBAY-not rated) was the catalyst for a significant uptick in users and payment usage, in our view, as illustrated in the chart below.



Source: PayPal

Paypal was launched in 1998 as a digital wallet. The company developed a relationship with eBay in 2000 to enable eBay users to access PayPal as their payment mechanism. Largely reflecting the eBay relationship, we believe, PayPal grew to one million user accounts that year. The number of transactions using PayPal grew from about one million to nearly 29 million from 2000 to June of 2002, again driven largely by the eBay relationship, we believe.

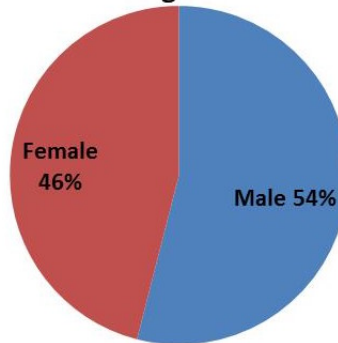
#### ***Gaming: Critical Component of Growth Strategy & Growing and Attractive Market***

Management believes that for Virtual Piggy, integrating with a growing number of online gaming sites could also be a catalyst to drive active usage. Statistics show that the online gaming industry continues to grow and remains a popular activity for Virtual Piggy's target demographic. Although the U.S. contains the highest number of gamers in the 13-34 demographic, the U.K., France and Germany have registered higher percentages of 13-34 year olds who play online. In addition, NPD Group's Online Gaming 2013 report found significant year-over-year growth in the number of gamers playing online, as well the number of hours they spent gaming each week. According to the survey of more than 8,800 domestic respondents, 72% played games online, up from 67% noted in the prior year's survey. Gamers also reported playing for longer periods of time, with the average weekly time spent playing online up 6%. The PC was the most popular device for playing, but almost all devices registered increased online playtime in 2013, according to NPD. Not surprisingly, reflecting growing penetration, mobile devices registered a double digit percentage point increase.

Of the universe of online gamers under the age of 24, 54% are males and 46% are females. Importantly for Virtual Piggy, in our view, **35% of U.S. online gamers purchased virtual goods in 2011, up 50% from those who made such purchases in 2010.** Of this group, 50% of U.S. online males 24 and under and 15% of females 24 and under purchased virtual goods in 2011. According to the Entertainment Software Association, a rising percentage of parents are involved in some capacity in their children's purchases and game play.

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### Gamers Aged 15-24



Source: NPD

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To leverage the gaming group, Virtual Piggy has announced deals with several gaming companies, including Free-to-play (F2P) sites. F2P games require no money upfront. However, players encounter limits to the game unless they pay for additional levels or new accessories. The company has already announced agreements with Gaia, Habbo, Ubisoft, WarGaming, Crytek, WoozWorld and Fantage. Woozworld is a virtual social network that targets the same 8 to 14 demographic as Virtual Piggy and its site is COPPA-compliant (see below). WoozWorld has more than 25 million registered users to-date. The company expects additional gaming sites to go live in the near-term. Management expects *Oink* to benefit from the engagement and regular usage that many of these sites enjoy.

As a first mover with a COPPA compliant online payment solution, management is optimistic that *Oink* can become a leading payment service for families. Once several new gaming publishers that are currently being integrated with *Oink* go live and with the introduction of the *Oink* Discover card, coupled with heightened marketing efforts, the company expects to drive user growth and engagement over the next 12-18 months.

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## YA MARKET – LARGE AND GROWING OPPORTUNITY

### *Young Adults Represent Hundreds of Billions of Dollars of Spending*

**Tweens and tweens represent an attractive market for merchants.** Reflecting allowance from parents, gifts and payments received for doing chores or part-time jobs, the young adult market has considerable spending power. With annual income of \$2,767 for 12-14 year olds and of \$4,923 for 15-17 year olds, teens have access to disposable income of \$91.1 billion, according to a Rand youth poll.<sup>1</sup> Moreover, parents spend more than \$150 billion on care for their teenage kids, including clothes, food, shelter, entertainment and personal accessories and the child has significant influence directing where this money is spent. According to a 2011 Harris Poll, kids have a greater amount of money to spend than ever before and also have a greater influence on their parents' purchases, as well. Between what they earn and spend and what their parents spend on them, the domestic teen market is estimated at nearly \$259 billion annually. Global teenage purchasing power is estimated at \$819 billion, according to TRU Insights research.<sup>2</sup>

This age group is also one of the first generations to grow up with e-commerce, as the launch of the online retail market dates to the mid-1990s and Amazon and eBay. Teens spend a substantial amount of their time online or on mobile devices. Statistics indicate that 74% of teens access the

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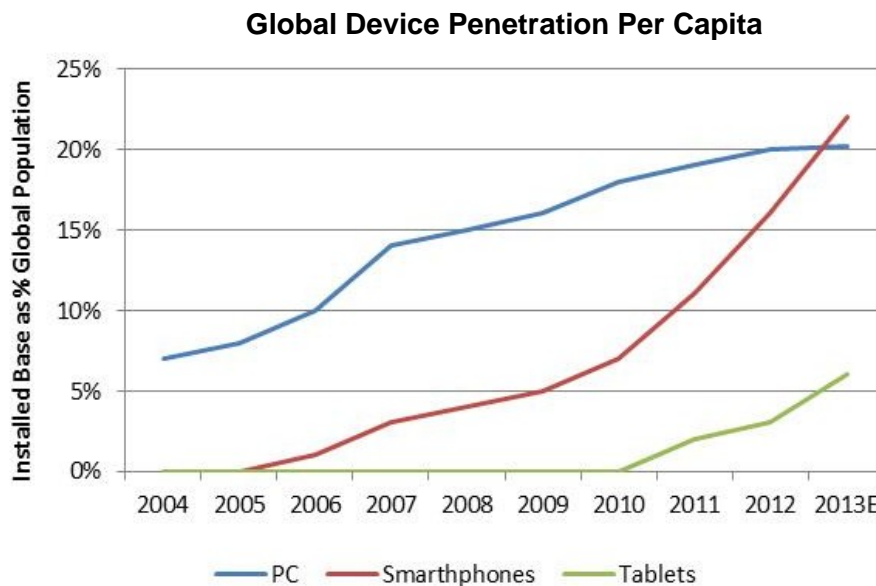
<sup>1</sup> *The Richest*, August 1, 2014

<sup>2</sup> *Diamonds Magazine*

internet via mobile devices versus 55% of adults. Moreover, nearly 80% of teens browse for goods online and 52% of teens under age 18 have shopped online, according to Forrester Research.

Online and mobile payment options for this group are limited. PayPal and other digital wallets are not COPPA-compliant and credit card penetration is below an estimated 15%, implying that they generally have to borrow a parent's credit card.

### **Growing Importance of Mobile**



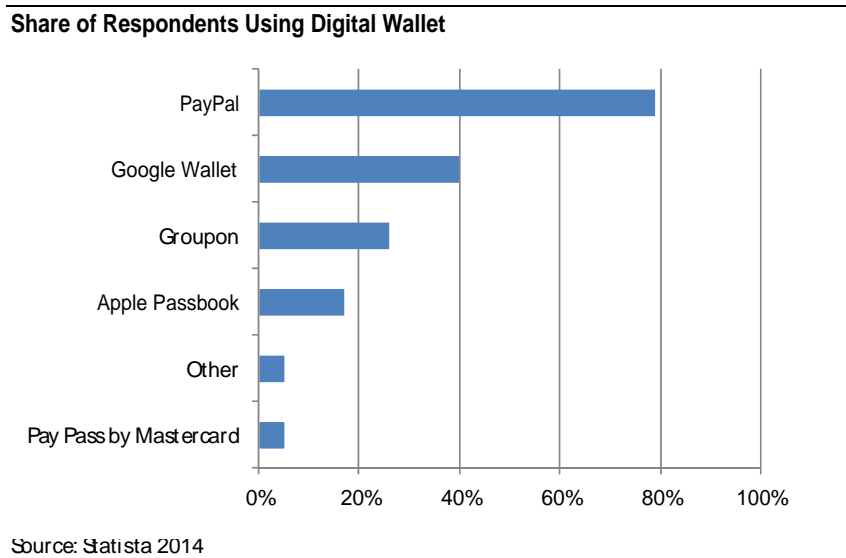
Source: BI Intelligence, Gartner, IDC, Strategy Analytics, World Bank 2013

The market for mobile payment transactions is estimated to reach over \$235 billion in 2015, according to Forrester Research and others. The company believes that the growing use of mobile payment mechanisms also increases the importance of *Oink*, with the *Oink* dashboard accessible through mobile devices, as well as online. Mobile technology penetration has grown dramatically over the past decade. Adoption rates of mobile devices such as smartphones and tablets are tracking significantly ahead of that of other technology platforms such as PCs or broadband. There were 1.2 billion smartphones and tablets shipped in 2013 according to IDC, with 218 million designated for business use. Smartphone penetration reached 65.2% of the U.S. mobile subscriber market during the fourth quarter of 2013, according to comScore, up more than 11% points from the same time frame a year earlier. Smartphones took only 8-years to reach 20+% penetration globally.

As early adopters of technology, teens spend a significant amount of time on mobile devices and are increasingly using their smart devices for e-commerce. To exploit this trend, retailers are enabling mobile commerce opportunities. In fact, launching a mobile strategy has been the most important initiative for retailers in 2014, according to Forrester Research. We believe that as this trend continues, it could be another factor to help drive *Oink* growth. For example, teen apparel retailer Wet Seal (WTSL-not rated) recently chose *Oink* to facilitate mobile shopping by its target YA market. In its first quarter 2014 conference call, WetSeal management indicated that its “key priorities for e-commerce in the second quarter are ... to become featured merchant on the *Oink* website and begin offering [*Oink*] technology.”

## INDUSTRY BACKGROUND AND COMPETITION

PayPal first launched in the late 1990s. Although it remains the market leader, other competitors have gained significant share over time. These include Google (GOOG-not rated) and Apple (AAPL-not rated), among others, as illustrated below. Moreover, the overall online payment solutions market has become highly competitive, with frequent new technology upgrades. For example, in July 2014, Visa rebranded its V.me digital wallet as Visa Checkout and Mastercard announced MasterPass. Yahoo! offers PayDirect, Citigroup offers c2it, the U.S. Postal Service offers email payment services through CheckFree and Western Union offers MoneyZap and BidPay. Apple just launched Apple Pay. According to Market Strategies International, although PayPal is well known and generally accepted by consumers, there are other payment brands that are increasingly gaining recognition.



Many online payment services have launched offerings for younger consumers. PayPal introduced a PayPal Student Account and Visa has Visa Buxx or Teen Visa, a prepaid card for teens. However, neither is for the 8-to-14 year old market that *Oink* targets. In fact, Virtual Piggy management believes that no other payment mechanism offers a solution that is compliant with government regulations concerning 8-to-14 year olds. Other services also do not allow parents to control spending by determining how much buying power they authorize on the card. **Management believes that *Oink* is the only COPPA compliant solution for children under the age of 18.**

Payment providers are extending their services to younger consumers, while at the same time, major technology companies increasingly are targeting younger demographics. For example, Google is considering allowing children to sign up for Google accounts, according to trade publications, including a child safe version of YouTube that offers a dashboard allowing parents to monitor their children's activities. Yahoo allows children to sign up for its services if their parents provide consent. As noted, Facebook, which is currently restricted to users 13 and older, is also interested in expanding to younger people, according to trade publications.

These initiatives to target teens and tweens underscore how attractive the YA consumer market is, in our view. As large players focus greater attention on the attractive teen market, the *Oink* service – which provides a safe online and mobile payment mechanism for minors – could be particularly timely, in our view. Major tech companies including Facebook and Apple are launching mobile payment services. However, as the only COPPA (see below) compliant solution, *Oink* is well-positioned in both the online and mobile spaces, in our view.

## REGULATION COMPLIANT

### ***Children's Online Privacy Protection Act***

The Children's Online Privacy Protection Act (COPPA) imposes restrictions on online sites directed to children under the age of 13, including requiring that they obtain verifiable parental consent. COPPA seeks to protect children from companies that store their data. It became effective in 2000 to regulate the online collection of personal information from children under the age of 13. The COPPA rules mandate that online retailers and service providers inform parents and obtain their permission before they collect, use or disclose children's personal data. The FTC expanded this legislation in December 2012 so that third parties also could not collect personal information from children through plug-ins without parental notice and consent on behalf of apps and websites marketed to children.

COPPA regulates information including full name, home address, email address, telephone number and other personally identifiable information that would allow someone to identify or contact the child. In addition, COPPA also covers other types of information such as geolocation metrics, photos, videos and audio files that contain a child's image or voice, as well as personal interests or hobbies that are collected through cookies and which can be used to identify the child. **With *Oink*, the merchant never sees the child's personal information**; the merchant only sees a child's *Oink* username and password.

Management believes *Oink* is the only parent controlled online payment mechanism that is compliant with the Children's Online Privacy Protection Act (COPPA) and other similar international legislation governing children's privacy. This is a critical differentiator, we believe, that provides a competitive advantage for Virtual Piggy. In March 2011, *Oink* received TRUSTe's Children's Privacy Seal and was certified as being COPPA compliant. *Oink* has received other certifications, as well, including from the Entertainment Software Rating Board (ESRB) and PTPA (Parent Tested, Parent Approved).

Other regulations governing online confidentiality of minors include the California Online Privacy Protection Act (CalOPPA), which was enacted in 2004, and there are similar privacy laws concerning minors in many international markets.

### ***Privacy Protection Creates Competitive Advantage***

We believe *Oink's* privacy feature assumes even greater significance in light of the Federal Trade Commission's (FTC) investigation of in-app purchases made through Apple, Google and Amazon. In 2011, the FTC launched an investigation to determine if they had properly disclosed to parents and children the ability to purchase items within games and other children's apps. Both Apple and Google have agreed to refund some of the payments. Apple agreed to repay \$32 million and in early September 2014, Google agreed to refund \$19 million.

The European Commission has implemented a similar investigation into Apple's practices vis-à-vis children. According to trade publications, the commission indicated that:

Consumers and in particular children need better protection against unexpected costs from in-app purchases. National enforcement authorities and the European Commission are discussing with industry how to address this issue which not only causes financial harm to consumers but can also put at stake the credibility of this very promising market. Coming up with concrete solutions as soon as possible will be a win-win for all.

The EU commission's focus included investigating "the targeting of children by in-app purchases." In July 2014, the European Commission announced that Apple had not adequately addressed the issue of unauthorized in-app purchases.

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## FUNDING

Similar to many other companies at their early stage of development, Virtual Piggy has funded its operations through the issuance of equity. Virtual Piggy has raised \$39 million since its 2008 inception. In January 2014, Virtual Piggy raised \$5 million through a private issuance of convertible preferred shares and common stock warrants. The company raised an additional \$5.8 million through this issuance in April 2014.

At its recent annual shareholders' meeting last month, shareholders approved a 50,000,000 increase in the number of authorized shares to 230,000,000. Given this, combined with the company's indication that it expects to do additional financings, we anticipate that Virtual Piggy will raise additional funds over the next 12 to 18 months.

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## VALUATION

*Oink* is still a "show me" story at this early stage, in our view. Nevertheless, for investors who can assume higher than average risk, we believe the shares represent an attractive option on *Oink's* growth prospects, reflecting the recent Facebook announcement, the upcoming launch of the *Oink* Discover card, the integration with a growing number of online gaming sites and heightened promotional efforts. **Our positive investment thesis is predicated on anticipated benefits to parents, merchants and minors of using *Oink*.** We also believe the Facebook relationship portends well for additional integrations with other major technology players. We initiate coverage of VPIG with a speculative Buy on the shares.

*Oink* currently has over one million users. In our view, this level is not indicative of *Oink's* upside potential post-integration with Facebook and others, and as the company drives greater consumer awareness through enhanced marketing. For example, in March 2000, PayPal had one million users and its user base had grown to 10.6 million by September 2001 and 14.1 million personal users by June 2002. In the table below, we present potential revenue scenarios based on *Oink* reaching certain user base levels. If *Oink* can reach five million users and roughly 30% of its user base regularly spends about \$20 per month, we estimate that Virtual Piggy would generate \$750,000 per month and \$9 million per annum from electronic and mobile transactions, at a 2.5% transaction fee. If *Oink* can grow its user base to 15 million, with roughly 40% regularly spending about \$25 a month, we estimate that Virtual Piggy would generate \$4.1 million per month in transaction revenue and \$49.5 million per annum, at a 2.75% transaction fee. On top of that, we also expect the *Oink* card and affiliate deals to produce revenue. Specifically, by advertising special promotions or discounts that its user base can obtain with *Oink*, the company also expects to generate affiliate revenue.

The company has not generated much revenue yet. As a speculative investment, we expect the multiple expansion to be somewhat muted in the early days. Our initial price target is \$2.00. This equates to a 5x multiple of revenue, per the 15 million user base scenario in the sensitivity analysis below, on a fully diluted basis. We present metrics for some other payment facilitators in the table that follows, although we believe none are directly comparable to Virtual Piggy, which has a specialty focus and, in success, would likely be faster growing, in our opinion.

**Virtual Piggy Sensitivity Analysis**  
**Monthly Revenue From Electronic Transactions, Card Usage and Affiliate Revenue**

Average user base (in millions)	1	2	5	10	15	20	25
<i>Transactional revenue drivers</i>							
% of users who transact regularly	10%	20%	30%	35%	40%	42%	45%
Average monthly spend	\$15	\$18	\$20	\$22	\$25	\$25	\$25
Total average monthly spend (\$M)	\$1.5	\$7.2	\$30.0	\$77.0	\$150.0	\$210.0	\$281.3
Fee to Oink	2.00%	2.20%	2.50%	2.75%	2.75%	3.00%	3.00%
<b>Monthly revenue to Oink (\$M)</b>	<b>\$0.03</b>	<b>\$0.16</b>	<b>\$0.75</b>	<b>\$2.12</b>	<b>\$4.13</b>	<b>\$6.30</b>	<b>\$8.44</b>
<i>Card revenue drivers</i>							
% of users who opt for card	2.0%	3.5%	5.0%	6.0%	7.0%	7.0%	7.0%
Number of cards issued (M)	0.02	0.07	0.25	0.6	1.05	1.4	1.75
<b>Monthly card fee revenue @ \$0.99/month (\$M)</b>	<b>\$0.02</b>	<b>\$0.07</b>	<b>\$0.25</b>	<b>\$0.59</b>	<b>\$1.04</b>	<b>\$1.39</b>	<b>\$1.73</b>
Average user monthly card spend	\$10	\$12	\$15	\$20	\$22	\$22	\$22
Total monthly spending using cards (\$M)	\$0.2	\$0.8	\$3.8	\$12.0	\$23.1	\$30.8	\$38.5
<b>Oink card rev @ 5 bps of average spent on card (\$M)</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.02</b>	<b>\$0.06</b>	<b>\$0.12</b>	<b>\$0.15</b>	<b>\$0.19</b>
<i>Affiliate revenue drivers</i>							
% of users who respond to Oink ads	2.0%	3.0%	4.0%	5.0%	6.0%	6.0%	6.0%
Average transaction	\$10	\$11	\$12	\$15	\$18	\$20	\$20
<b>Revenue @ 2% of transaction value (\$M)</b>	<b>\$0.00</b>	<b>\$0.01</b>	<b>\$0.05</b>	<b>\$0.15</b>	<b>\$0.32</b>	<b>\$0.48</b>	<b>\$0.60</b>
<b>Annual revenue to Oink = Monthly transactional + Card + Affiliate revenue x 12 months (\$M)</b>	<b>\$0.7</b>	<b>\$2.9</b>	<b>\$12.8</b>	<b>\$35.1</b>	<b>\$67.2</b>	<b>\$99.8</b>	<b>\$131.6</b>

Source: Company reports, Zacks Small Cap Research.

**Virtual Piggy Peer Analysis**

Company	Ticker	9/16/2014	52-Week		Revenue (\$M)			EPS		
		Price	High	Low	2013A	2014E	2015E	2013A	2014E	2015E
American Express	AXP	88.36	96.24	72.08	32,970	33,880	35,400	4.88	5.51	6.04
Discover Financial	DFS	63.42	65.80	48.40	8,220	8,690	9,120	4.96	5.33	5.64
Mastercard	MA	76.59	84.75	64.74	8,350	9,410	10,520	2.61	3.00	3.59
Visa*	V	217.30	235.50	180.11	11,780	12,670	14,000	7.59	8.99	10.37
				<b>Mkt Cap (\$M)</b>		<b>Price / Revenue</b>			<b>P/E</b>	
American Express				92,778	2.8x	2.7x	2.6x	18.1x	16.0x	14.6x
Discover Financial				29,294	3.6x	3.4x	3.2x	12.8x	11.9x	11.2x
Mastercard				88,844	10.6x	9.4x	8.4x	29.3x	25.5x	21.3x
Visa*				136,521	11.6x	10.8x	9.8x	28.6x	24.2x	21.0x

Source: Company reports, Yahoo Finance, Zacks

\*FY ends Sept. Companies not rated

We also believe Virtual Piggy could be an interesting acquisition candidate down the road for a larger technology company or payment provider seeking to expand within the YA market, in a regulatory compliant way. Management believes the recent patent award strengthens Virtual Piggy's IP position, which, in turn, could enhance the company's appeal as a take-out candidate, in our view. We note that eBay acquired PayPal for some 8.7x TTM revenue. In our sensitivity analysis, that would equate to a valuation of roughly \$585 million, based on 15 million prospective users.

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## MANAGEMENT

**CEO** The company's co-founder and CEO Dr. Jo Webber is an experienced software company executive. Prior to founding Virtual Piggy, she served as CEO of privately-held InnaPhase Inc., which was sold to Thermo Electron (TMO-not rated) for \$71 million in 2004 under her leadership. She then became the CEO of Energy Solutions International, which supplied software for the management of oil and gas pipelines. GFI Energy Ventures, now part of Oaktree Capital Management, acquired Energy Solutions International in 2010.

**CFO** Joe Dwyer has over 30 years of experience in financial management. Prior to joining Virtual Piggy, he was CFO of privately held software company OpenLink Financial. Prior to that, he was a board member and interim chief administrative officer of Energy Solutions International in 2011 through 2012. He was CFO of software companies AXS-ONE from 2005 to 2009 and of Caminus Corporation from 1990 to 2005.

**CTO** Pradeep Ittycheria is the company's co-founder, as well as its Chief Technology Officer. He has extensive experience managing product engineering teams in sectors such as insurance, software services, life sciences and energy.

**CMO** Chief Marketing Officer Joanne Wong is a veteran entertainment industry marketing executive. Prior to joining Virtual Piggy, she was Vice President of Strategy at Chatter Inc., a brand strategy company and she was the Director of Global Brand Management at Activision Blizzard prior to that. At Activision Blizzard, she managed the global marketing campaigns for the Tony Hawk and DreamWorks Animation brands. She joined the company in August 2012 and will spearhead Virtual Piggy's marketing efforts as it ramps up its promotional activities over the next several months.

**Business Development** Earlier this year, the company hired industry veteran Trent Walker to head its business development efforts. Prior to joining Virtual Piggy, he spent six years at Bertelsmann unit Arvato in their financial services division and also held positions as senior account director at First Franklin Financial and in business development at PHH Mortgage earlier in his career.

**Advisory Board** Virtual Piggy also has an advisory board that includes high profile Stedman Graham, Sela Ward and John Paul DeJoria. These are high profile celebrities who can help Virtual Piggy with its promotional efforts, we believe. For example, CEO Jo Webber and John Paul DeJoria recently gave a joint radio interview to discuss company trends including the recent integration with Facebook.

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## FINANCIAL HISTORY

Virtual Piggy has not generated much revenue yet, having just launched commercially in March of 2013. Although revenue of \$1,678 registered in the first six months of 2014 increased over 10-fold from \$146 recorded in the same period of 2013, the revenue level is still minimal. At the same time, the company has assembled a team of executives to help launch *Oink* and has also incurred marketing, product development, professional, technology integration and general expenses. Reflecting a cost structure to support its anticipated growth, Virtually Piggy generated net losses of \$7.6 million in the first half of 2014 and \$6.1 million in the first half of 2013.

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## RECENT NEWS

On August 28, 2014, Virtual Piggy announced that it had integrated with Facebook.

On August 26, 2014, Virtual Piggy was granted a patent covering what management calls its *secret sauce*.

On August 26, 2014, Virtual Piggy announced that at its annual meeting on August 19, 2014, shareholders approved an amendment to increase the number of authorized shares from 180 million to 230 million.

On August 12, 2014, the company announced that it has finalized partnerships with video game companies Smilegate West, gamigo AG and Fantage and expanded its partnership with Habbo to include France and Germany.

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## RISKS

We believe risks include the following, among others:

- Merchant integration and user adoption of *OINK* could be slower than anticipated or never materialize at all in a meaningful way, if the company's target market continues using their current payment methods.
- A better capitalized competitor could develop a COPPA compliant solution.
- The company has indicated that it likely will pursue additional financings, which could be dilutive to current shareholders.
- Increased spending on marketing and technology could drive operating losses higher and also delay Virtual Piggy's reaching break-even.
- The company may encounter headwinds in signing new merchants and technology companies, the Facebook agreement notwithstanding.

## INSIDE OWNERSHIP

Insiders, including board members, hold 16.6% of the shares, of which the CEO holds a 7.2% stake. Additionally, two large shareholders hold an additional 26.8%, for 43.4% in the hands of executives, board members and large shareholders.

### Insider Common Share Ownership

CEO Jo Webber	7.2%
CFO Joseph Dwyer	0.0%
CTO Pradeep Ittycheria	3.0%
Directors & executives combined	16.6%

### *Other insiders*

Individual investor	14.6%
John Paul Dejoria Family Trust	12.2%
Total insider holdings	43.4%

Source: Company reports

## PROJECTED INCOME STATEMENT & BALANCE SHEET

### Virtual Piggy, Inc. Income Statement and Projections (\$)

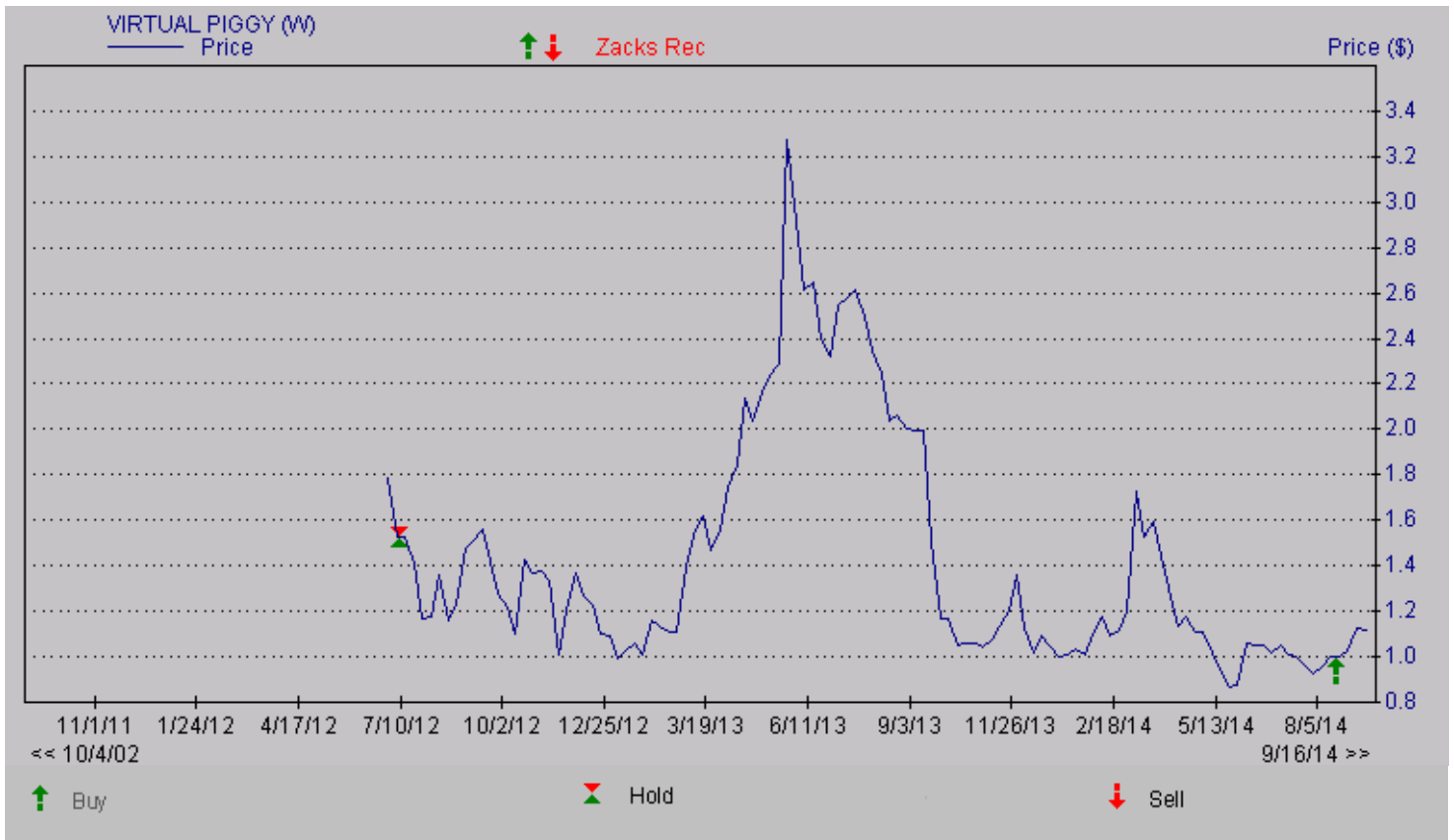
	2012	1Q13	2Q13	3Q13	4Q13	2013	1Q14	2Q14A	3Q14E	4Q14E	2014E
Revenue	1,213	88	58	1,382	928	2,456	425	1,253	2,005	20,000	23,683
Sales and marketing	2,092,551	894,647	1,114,440	3,049,709	2,217,019	7,275,815	1,197,412	1,490,016	1,504,916	1,519,965	5,712,309
Product development	1,530,348	461,385	619,750	742,425	827,040	2,650,600	885,974	818,598	826,784	835,052	3,366,408
Integration and customer support	465,277	119,197	199,859	178,482	214,813	712,351	187,039	188,102	189,983	191,883	757,007
General and administrative	3,368,675	1,035,071	1,148,697	1,329,347	1,054,321	4,567,436	1,217,303	1,284,536	1,297,381	1,310,355	5,109,576
Strategic consulting	4,499,232	176,794	297,561	10,244	292,376	776,975	-	280,048	282,848	285,677	848,573
Other	-	-	-	-	-	-	-	-	-	-	-
Total operating expenses	11,956,083	2,687,094	3,380,307	5,310,207	4,605,569	15,983,177	3,487,728	4,061,300	4,101,913	4,142,932	15,793,873
Operating loss	(11,954,870)	(2,687,006)	(3,380,249)	(5,308,825)	(4,604,641)	(15,980,721)	(3,487,303)	(4,060,047)	(4,099,908)	(4,122,932)	(15,770,190)
Interest income	5,704	3,489	2,825	3,167	1,250	10,731	1,502	2,439	2,463	2,488	8,892
Interest expense	(90,560)	-	-	-	(6,382)	(6,382)	(94,280)	(285)	(288)	(291)	(95,144)
Chg fair value embedded deriv:	-	-	-	-	-	-	(2,185,375)	2,184,750	2,206,598	2,228,663	4,434,636
Total other	(84,856)	3,489	2,825	3,167	(5,132)	4,349	(2,278,153)	2,186,904	2,208,773	2,230,861	4,348,385
Net loss	(12,039,726)	(2,683,517)	(3,377,424)	(5,305,658)	(4,609,773)	(15,976,372)	(5,765,456)	(1,873,143)	(1,891,135)	(1,892,071)	(11,421,806)
Less: Deemed dividend distributions							(2,366,419)	(3,489,000)	(3,523,890)	(3,559,129)	(12,938,438)
Net to shareholders	(12,039,726)	(2,683,517)	(3,377,424)	(5,305,658)	(4,609,773)	(15,976,372)	(8,131,875)	(5,362,143)	(5,415,025)	(5,451,200)	(24,360,243)
LPS	(\$0.14)	(\$0.03)	(\$0.03)	(\$0.05)	(\$0.04)	(\$0.15)	(\$0.07)	(\$0.05)	(\$0.05)	(\$0.05)	(\$0.21)
Avg. shares out.	85,325,709	101,792,509	106,261,607	111,372,435	111,393,433	107,704,996	114,818,293	117,041,436	118,211,850	119,393,969	117,366,387

### Virtual Piggy, Inc. Balance Sheet (\$)

	Dec-12	Sep-13	Dec-13	Mar-14	Jun-14
Cash & equivalents	\$7,371,036	\$4,583,551	\$1,752,461	\$4,108,065	\$5,914,803
Accounts Receivable	53	955	1,000	1,285	1,264
Insurance receivable	75,000	-	4,325	-	-
Prepaid expenses	20,500	200,771	220,908	280,526	677,527
Total current assets	7,466,589	4,785,277	1,978,694	4,389,876	6,593,594
Computer equipment	70,149	99,156	89,021	93,654	103,868
Furniture and fixtures	46,130	53,714	57,238	83,981	99,710
Leasehold Improvements	-	-	-	8,350	54,700
Less: accumulated depreciation	(19,580)	(40,054)	(41,544)	(46,016)	(57,915)
Net property & equipment	96,699	112,816	104,715	139,969	200,363
Deposit	65,000	63,510	118,118	346,949	313,010
Patents and trademarks	362,496	604,572	739,657	784,152	705,717
<b>Total assets</b>	<b>\$7,990,784</b>	<b>\$5,566,175</b>	<b>\$2,941,184</b>	<b>\$5,660,946</b>	<b>\$7,812,684</b>
Accounts payable & accrued exp	704,602	1,393,206	2,149,681	1,596,488	1,124,240
Litigation settlement	450,000	-	-	-	-
Notes payable	-	-	913,913	-	-
Embedded derivative liability	-	-	-	3,834,200	5,138,450
Total current liabilities	1,154,602	1,393,206	3,063,594	5,430,688	6,262,690
Stockholders' equity	<b>\$6,836,182</b>	<b>\$4,172,969</b>	<b>(\$122,410)</b>	<b>\$230,258</b>	<b>\$1,549,994</b>
Liabilities & stockholders' equity	<b>\$7,990,784</b>	<b>\$5,566,175</b>	<b>\$2,941,184</b>	<b>\$5,660,946</b>	<b>\$7,812,684</b>

Source: Company reports, Zacks Small Cap Research

# HISTORICAL ZACKS RECOMMENDATIONS



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Buy/Outperform: The analyst expects that the subject company will outperform the broader U.S. equity market over the next one to two quarters.  
Hold/Neutral: The analyst expects that the company will perform in line with the broader U.S. equity market over the next one to two quarters.  
Sell/Underperform: The analyst expects the company will underperform the broader U.S. Equity market over the next one to two quarters.

The current distribution is as follows: Buy/Outperform- 16.8%, Hold/Neutral- 77.0%, Sell/Underperform – 5.7%. Data is as of midnight on the business day immediately prior to this publication.