Personal Financial Aggregation and Social Media Mining: A New Framework for Actionable Financial Business Intelligence (AFBI)

Vipul Gupta, Haub School of Business, Saint Joseph’s University, Philadelphia, PA, USA
Sameer Khanna, Computer Science Department, Saint Joseph’s University, Philadelphia, PA, USA
Iljoo Kim, Haub School of Business, Saint Joseph’s University, Philadelphia, PA, USA

ABSTRACT

Consumers have been banking and trading online for several years now. More ambitious and tech savvy consumers have also been constructing an overview of their financial life by using Personal Finance software like Quicken and online tools such as Yodlee and Mint.com. Since late 1999, Personal Financial Aggregators (PFAs) have started offering internet based services to automate this process of account aggregation. This web account aggregation allows individuals to log onto one Web site and view all of their online accounts in one place. Online accounts that can be aggregated include financial sites (bank, credit card, brokerage, insurance, etc.) as well as lifestyle-based sites (travel awards, email, chat rooms, etc.). The idea behind Personal Financial Aggregation is to offer consumers their own personal portal from which they can see all their finances at a glance, balance and rebalance accounts, make investments, pay bills, etc. In addition to this Web data aggregation, consumers are relying on social media sites such as facebook, twitter and other internet forums to get financial advice from each other and also to critique various financial products and services. As a result, many Financial Institutions (FIs) are using social media analysis and mining to shape their businesses. FIs include consumer banks, brokerages, insurance, wealth management firms, etc. This paper presents a framework for financial institutions that combines social media mining, web mining, online advice engines, and web aggregation. This framework can be utilized by FIs to analyze online buzz about their products/services and combine those insights with web aggregation and online advice to create different revenue streams and to offer personalized bundled products and services. The authors conducted interviews with various executives at the Global Financial institutions and insurance companies to test and validate this framework. A comprehensive review of top service providers and vendors that can enable and drive this framework is also discussed in this paper, followed by managerial implications, benefits and challenges.

Keywords: Actionable Business Intelligence, Financial Institutions, Personal Financial Aggregation, Social Media Mining

DOI: 10.4018/IJBIR.2014100102
1. INTRODUCTION

The 21st century is experiencing an amplified communication explosion, ignited by social media (Williams and Crittenden 2012). This has resulted in vast changes in the way consumers receive and use marketing communications. According to Blackshaw and Nazzaro (2004), this consumer-generated media ‘describes a variety of new sources of online information that are created, initiated, circulated and used by consumers intent on educating each other about products, brands, services, personalities, and issues.’ Seizing this opportunity, an increasing number of organizations rely on social media for interacting internally, as well as with external constituents. Using advanced and predictive analytics applied holistically via a centralized “command center,” companies can mine growing pools of unstructured data, deliver more timely and actionable insights, and better inform business and operational strategies. This social Web (blogs, social networks, wikis, podcasts, mail groups, newsgroups, forums and chat rooms) has become an excellent source for gathering consumer opinions (more specifically, consumer reviews) about products and services.

Recently, there have been numerous studies (both academic as well as practitioner) published in this growing field of social media and social media analytics. Srivastava and Cooley (2012) focused on mining the web, and discussed the benefits of personal account aggregation. Thankachan and George (2012) discussed social media mining from the perspective of FIs. Trahan et al. (2012) analyzed the online financial planning industry trends. Cognizant (2013) also published a white paper proposing guidelines for social media analytics. Chanda and Zaorski (2013) discussed social media usage in the financial services industry from a compliance standpoint. Zhang and Segall (2008) introduced three types of mining: data mining, web mining and text mining and the challenging problems in data/web/text mining research. In another empirical article, Mathur et al. (2012) studied the impact of social media usage on consumer purchasing behavior. Further, Poynter (2011) proposed that from a commercial point of view, social media research can be divided into three categories: social media monitoring (business purpose), purposed communities and other form of social media research (e.g., netnography). Smith (2013), interrogating data garnered from 6400 respondents to evaluate experiences with brands on facebook. Thelwall et al. (2009) studied sentiment analysis in social media based on gender differences.

In this research article, we have attempted to extend the literature by studying the BI issues facing the FIs, especially due to the rapid growth of social media and adoption of online tools for personal financial aggregation. We present a comprehensive framework titled “Actionable Financial Business Intelligence (AFBI)”. Various components of this framework are then highlighted in detail, followed by our conclusions and summary.

2. ACTIONABLE FINANCIAL BUSINESS INTELLIGENCE [AFBI] FRAMEWORK

In this article, we present a new framework (see Figure 1), titled Actionable Financial Business Intelligence (AFBI) that can be leveraged by FIs to integrate various aspects of Social Media Mining (SMM) and Personal Financial Aggregation (PFA). Instead of using a piecemeal approach for SMM and PFA, this framework provides a strategy for FIs to integrate their BI operations. Below, we discuss the various aspects of this framework.

2.1. Personal Financial Aggregation

The web-based computer systems of various organizations hold a great amount of our personal information which is based on our evolving relationship with that organization (Srivastava and Cooley, 2003). Personal Financial Aggregation (PFA), also known as Web account aggregation allows individuals to create one master account on a trusted website and then use that website as a personal portal to view all of their
Intelligent Agents for Competitive Advantage: Requirements and Issues
www.igi-global.com/chapter/intelligent-agents-competitive-advantage/6063?camid=4v1a